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ABSTRACT

The proceedings of the 1981 International Congress of Applied Linguistics include the full text of papers read by invited speakers. The keynote address, four plenary lectures, seven special lectures, and one symposium symmary are presented. The papers cover such topics as the status of applied linguistics, bilingual education for majority and minority language children, linguistic evidence for defense in a criminal case, the fundamental pedagogical principle in second language instruction, medical communication, computer aids in translation, quantitative contrastive analysis, text linguistics, contrastive prosody, teaching spoken language, topological features of Balkan languages, and discourse analysis and language learning. (RW)

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# STUDIA LINGUISTICA

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# CONTENTS

*Preface* 5

*Keynote address*

BERTIL MALMBERG: Applied linguistics: past, present and future 7

*Plenary lectures*

MERRILL SWAIN: Bilingual education for majority and minority language children 15

ROGER W. SHUY: Can linguistic evidence build a defense theory in a criminal case? 33

STEPHEN D. KRASHEN: The Fundamental Pedagogical Principle in second language teaching 50

AARON V. CICOUREL: Language and the structure of belief in medical communication 71

*Special lectures*

HANS KARLGREN: Computer aids in translation 86

TOMASZ P. KRZESZOWSKI: Quantitative contrastive analysis 102

WILGA M. RIVERS: Apples of gold in pictures of silver: Where have all the words gone? 114

ALBRECHT NEUBERT: Translation, interpreting and text linguistics 130

EVA GÅRDING: Contrastive prosody: a model and its application 146

GILLIAN BROWN: Teaching the spoken language 166

OLGA MIŠESKA TOMIĆ: Typological features of Balkan languages and their pedagogical consequences 183

*Symposium*

EVELYN HATCH: Discourse analysis and language learning 206

# PREFACE

This collection of papers in Applied Linguistics serves the dual function of volume 35 of *Studia Linguistica* and *Proceedings II* of AILA 81.

AILA 81, short for the Sixth International Congress of Applied Linguistics, took place in Lund from 9 to 14 August 1981, hosted by the University of Lund and organized by the Swedish Association for Applied Linguistics (ASLA) under the auspices of Association Internationale de Linguistique Appliquée (AILA).

A first volume, *Proceedings I*, including abstracts of some 300 section papers and summaries of three workshops, was published by the Congress and distributed to all participants before the event. This second volume, *Proceedings II*, includes the full text of papers read by invited speakers at the Congress: the keynote address, four plenary lectures, seven special lectures and, in addition, one symposium summary. Contributions to another symposium on "International language and the vernaculars" will appear in the journal *Applied Linguistics*. Many more papers from the Congress will be published in various other journals.

As members of the Organizing Committee, we believe that these papers reflect some of the highlights of the Congress and constitute important studies that participants and nonparticipants alike will want to have documented in print; as editors of *Studia Linguistica*, we hope that regular readers of our journal will appreciate this double-number sally into some current topics of Applied Linguistics.

Finally, we wish to thank the authors of these papers for their participation in the Congress as well as for their cooperation in helping us to prepare their contributions for the press.

Lund, December 1981
*Bengt Sigurd* *Jan Svartvik*

*Bertil Malmberg*
University of Lund

# APPLIED LINGUISTICS: PAST, PRESENT AND FUTURE

In 1966, I was asked by the publisher of *IRAL* to take over the editorship of that journal, which was by then already well-known, and in collaboration with my honoured colleague and friend Gerhard Nickel, to try to develop the review as a mouthpiece for research and debate. I found it important to formulate a few principles which, in my opinion, should form the basis of a science called applied linguistics. I strongly felt the need of such principles of definition in order to make applied linguistics into a real science, a field of research in its own right. My experiences of fourteen years of editorship have confirmed my initial view. The problem is still to find the borderline between pure linguistic theory and pedagogical technique on the one hand and, on the other, a linguistic science which might make the theory useful and the technique scientifically based.

What I wanted to stress in my introductory article was that applied linguistics is, and must be, as scientific as any other field of science and that its special orientation offers a choice between numerous possible directions of research which may have useful applications. Such a choice does not, and must not imply any kind of modification in scientific rigour and methodological correctness. I wrote as follows in the first number of *IRAL* for which I was responsible: "Applied linguistics as a general science means to me the theories and analyses of those theoretical aspects of language and of linguistic communication which are basic to these different activities. If the 20th century linguistics has contributed so much to teaching methods and teaching technique, whereas 19th century lingusitics did not (expect for its phonetic aspect as worked out by the Classical school), this is because structural linguistics has essentially taken up two aspects of fundamental interest for all sorts of applications: *language as a structure and language as a social phenomenon*, both inherited from Ferdinand de Saussure's famous 'Cours'" (*IRAL* V, 1967:1–2). With this statement I touched upon an essential point: the theory of language as reflected in the principles of application. To make this relationship clear, I have to go back a century in the history of linguistics.

Everybody knows that 19th century linguistics was comparative and historical, concentrating on the genetic relationship between languages and on evolution. The regularity of sound change was its basis. The phonetic change conditioned the morphological, syntactic, and semantic modifications. Explanations had to be historical. The phonetic modifications were looked upon as a change of substance (of articulations, of sound). The phonetic substance, as such without any diachronic dimension, was supposed to throw light on phonetic evolution and sound laws. Although, for evident reasons, this was a great mistake – linguistic evolution is a change of form, not of substance – the illusion gave rise to an independent phonetic science, soon to be split up into two branches, the so-called classical phonetics (Sweet, Passy, Viëtor) based on auditory analysis, and the experimental, or instrumental phonetics for which the emergent acoustic and physiological research became a solid basis (Helmholt, Hermann, Abbé Rousselot, Pipping). The first of those two branches became the starting-point of an independent science of speech and of an early type of applied phonetics within language teaching, the latter a basis for later research in speech therapy. Without going into details I merely wish to stress that it was within the domain of phonetics that the diachronic dominance was first challenged, thus making applications of scientific results outside linguistics and phonetics fruitful.

In fact, the reaction against the then current methods in foreign language teaching, uncritically taken over from the Latin grammar school, came from groups of linguists and phoneticians, on the Continent and in Scandinavia, under the influence of the first pioneers in linguistics. In 1886, at a linguistic congress held in Stockholm, a group of Scandinavian scholars, among them the famous Danish linguist Otto Jespersen, influenced by Passy, Sweet and Viëtor, outlined a modern program for the teaching of foreign languages: less theoretical grammar but more attention to spoken language, to pronunciation and phonetics, to free composition instead of mechanical translation. Jespersen, the most prominent scholar within the group, was at the same time the one who was most eager to apply the new ideas in his elementary manuals of foreign languages (English, German, French). These were not "applied linguistics". They were applications of linguistics, more precisely of a type of linguistics which he demonstrated scientifically in his numerous treatises on English and on general linguistic theory. If any linguist in the past merits to be mentioned as the first great "applied linguist", I do not hesitate to give this place to Otto Jespersen, adding that without his solid theoretical background he would never have become as famous in his applications. We also know that, without being a structuralist himself, he prepared the ground for structural linguistics by insisting on synchronic description, synchronic systems, and on distinctivity.

What I have mentioned so far may already have given an idea of what I want to stress in connection with this congress and as an introduction to discussions and reports, i.e. the intimate relationship between linguistic theory and the principles of application. This dependency may be particularly strong within foreign language teaching, but I have some difficulty in seeing any real difference between language teaching and other applications (in audiology, speech therapy, language planning, sociolinguistics). The pedagogical technique has followed the changes in teaching principles, thus remaining closely connected with variations in linguistic theory. I will mention just a few examples.

It is easily understandable that diachronic and comparative linguistics had not been able to contribute to the methods of teaching modern languages which had become a necessity as Latin ceased to function as an international medium of communication. Linguistic contributions to a teaching methodology became possible only with the introduction of synchrony among the forerunners to structuralism. Within language teaching inspired by structural thinking, the theoretically formulated rules were gradually replaced by patterns to be imitated. Creativeness, one of the essential principles in Hjelmselv's thinking, was introduced into linguistic theory and into teaching methods long before anybody had heard about Chomsky. As far as I know, the so-called direct method in language teaching had its theoretical background in different forms of structuralism. It had a practical social goal (speech perception and speech production, no theoretical knowledge of structures and rules as such). The Saussurean thesis of the arbitrariness of the linguistic sign and of linguistic structures made translation not only unnecessary but impossible. Learning a new language was not in principle different from learning the mother tongue. The first language was of no value for acquiring a second one. When the linguistic arbitrariness was questioned or denied by other scholars and the old idea of profound, universal structures – basic in the linguistic philosophy of the 17th and 18th centuries – came up again, this fundamental paradigmatic change was once more rapidly reflected in teaching methods. If two languages had structural features in common, this fundamental basis could be used as a common denominator in teaching and in translation. The appreciation of this elementary fact, which a little later was to have its counterpart in the use of contrastive analysis in language teaching, was not very new. It corresponded to everyday experience. Closely related languages, such as the Scandinavian or certain Slavic languages, are often mutually intelligible in spite of structural differences. This is still more the case with dialects and sociolects of the same language, with style, with spoken as compared with written language, although even in such cases there are differences of structure. We all know how a completely different attitude to theoretical grammar, to explicit rules and to translation in language teaching was the result of these modifications of the general theory of language. Until recently, the view of many scholars, among them myself, was that translation between languages was theoretically impossible though, for extra-linguistic reasons, practically feasible. Under the influence of Roman Jakobson and later linguistic theory I have myself gradually become aware of the theoretical possibility of translation: the transfer of the same referent (not content) through different linguistic forms. It would be superfluous to underline the practical importance of such a change in linguistic theory in a multilingual world in which, thanks to modern methods of communication, distances decrease day by day. There have been numerous contributions to translation theory and practice over the past few years. The role of the computer is increasing within this area as within so many others.

Saussurean linguistics and the systems derived from it (glossematics, etc.) implied a qualitative analysis of language. The structure of a language is the sum of all possible forms and procedures in spite of differences in their respective frequency of occurrence. For Louis Hjelmslev, a single example was enough to prove the presence of a structural type in a system. So far, we have mentioned a few cases of differences of application as consequences of different theories. By contrast, the idea of frequency as part of linguistic structure and of statistics as a descriptive procedure illustrates how a practical need may give rise to theoretical modifications and new descriptive principles. In phoniatrics, the concepts of normal variation and average values emerged as early as 1925 in the works of the Germany scholar R. Schilling. They became the point of departure of the phonometric investigations started in the early 30s by Eberhard and Kurt Zwirner. Another aspect of quantitative description had its source in the theory of stenography and in the calculation of the frequency of letters, e.g. in an early work of the Swedish scholar O. W. Melin (printed in a history of stenography, vol. II, 1929). The frequency of occurrence of phonemes and words soon became a governing principle for the direct method in language teaching. Numerous frequency word-lists were published and widely used by authors of practical manuals. Text books and other teaching materials were based increasingly on the idea of introducing phonology, vocabulary and syntax in a progressive order of difficulty. At the same time, the general laws of distribution and frequency were discovered and introduced into the theoretical description of languages and language. The statistical principle had been introduced as early as 1897 in a work by the German F. W. Käding but was not made part of the descriptive procedure until the appearance of the works of G. K. Zipf (1929 and 1949) and the formulation of the so-called Zipf's law. This law is fundamental for a correct understanding of language and language change and its applications in teaching, in logopedics, in stylistics, in spelling, in determination of authenticity, are numerous and well-known. On the basis of Paul Menzerath's *Architektonik des deutschen Wortschatzes* (1954), numerous descriptive devices were introduced. The concepts of rank order of consonants and vowel adherence, introduced by Bengt Sigurd, were theoretically a complement to the theory of the syllable and of syntagmatic structure in general. The pedagogical implications of these concepts can hardly be underestimated.

Ferdinand de Saussure's interpretation of the language mechanism implied two sets of relations: paradigmatic (or, as he put it, associative) and syntagmatic. Early structuralism had started, as was natural, with the former of these relationships (the structure of the paradigm and the oppositions on which this structure was based), and it was only later that it introduced and developed the study of the relations valid in the syntagm and of the rules which determined syntagmatic structures. I do not need to dwell on the evolution of this aspect which, following the work of Mathesius, Menzerath, Meyer-Eppler, Sigurd and others, has resulted in far-going distributional analyses. On the content level the syntactic aspect, at first neglected by structuralists, became the basis of the first works of Noam Chomsky. And finally the concept of text – the, in principle, unlimited sign – and the study of the mechanisms which determine the semiotic and semantic unity of the large signs have threatened to blur the borderline between linguistic and literary analysis. The references which determinde the relations between linguistic units (forms, pronouns, words, propositions) have become an object of profound analysis, often challenging the rules of traditional grammar. Text linguistics is one of many new fields of research undreamt of in traditional linguistics. There is no doubt that this progression from small isolated pieces towards discourse and texts has brought linguistics closer to the essence of human language, thus leading to new applications.

We know that prosody (stress, accents, tones and intonation) presupposes sequences of segmental units. As long as only paradigmatic relations were taken into account in the teaching of foreign language pronunciation, prosody remained just as neglected on the expression level of language as syntax on the content level. According to the minutes preserved from a committee meeting concerning teaching practice in French from 1910 – in the school from which I graduated almost 50 years ago – the teachers of French had agreed on the importance of a correct pronunciation of French vowels and consonants, but also on the uselessness of trying to impart to the pupils any kind of native-like intonation and prosody. The paradigm had to be respected. The structure of the syntagm could be neglected, another consequence of the comparative heritage. When I started my studies of French some 15 years later, this state of affairs had been slightly modified. Today prosody, accents and intonation are an important part of the teaching of foreign languages. Contrastive analysis of intonation patterns is a popular field of research whose results claim the attention of teachers in their pedagogic practice. The program of this congress bears witness to this evolution. If I may venture to say so myself, the institutes which are organizing the congress are centres for prosodic research and have been so for a number of years.

We are in fact in a position to follow, step by step, this general evolution of the theory of language as it is reflected within the fields of applications. No manual of a foreign language starts today, as was so often the case half a century ago, with a series of isolated sentences which only served to give examples of unknown phonemes, unknown forms, and elementary rules of word order. A text, spoken or written, with a reasonable meaning and in a reasonable extra-linguistic context, now introduces the beginner to the world of the new language. Even listening to spoken sentences produced by a group of speakers or watching TV may today be the pupil's first contact with the foreign language (language learning without books). On the theoretical level, the spoken language has become the object of analytical study as an independent form of language with its own structure, its own habits of relations and dependencies. On the other hand, the written texts are analysed not only from the point of view of their linguistic structure and correctness but also their readability. Finally I want to mention the teaching of deaf and partially deaf individuals as yet another example of linguistic research as a consequence of practical needs. The first efforst in this direction in the 16th and 17th centuries had not yielded any contribution to our knowledge of speech and hearing. But when this teaching of deaf people was brought into contact with scientific results within acoustic phonetics and sound perception, the basis was created for a real exchange of experiences between scientists and teachers. Speech sound analysis and speech sound synthesis have contributed greatly to the success of the effort to facilitate auditory communication between deaf and hearing people (especially the utilisation of auditory residues for auditory training and oral communication). Problems of this kind had first been raised on the basis of pedagogical experience. Even before this period numerous teachers of partially deaf children had made important contributions to physiological phonetics, examples of which could be quoted from work in this university.

Another aspect of such mutual influence between deaf-mute pedagogics and theoretical communication research is the current tendency of re-introducing sign language as an accepted means of communication, not only between deaf people but also between deaf and hearing people. It is no longer a question of applied linguistics in its strict sense when this kind of communication and its importance for the handicapped is made an object of research. It is now a question of applications of the wider field of communication research which is now called semiotics (for the earlier semiology). Now, more than before, it is claimed that sign language is the mother tongue of the deaf and has to be respected as such. Linguistic theory supports such a position. The handicapped are a language minority just like so many other deviating groups. This brings us over to the general aspect of language in society.

The study of dialects, i.e. the spatial variation of language, was started about a century ago by historians and comparativists who had hoped in this way to contribute to the understanding of sound laws and evolution. The same illusion had been the starting-point for phonetics. Dialectology had, however, brought about a previously unsuspected connection between language and its extra-linguistic environment. The study of words also became a study of things ("Wörter und Sachen"). As a comparativist and historian – and one of the greatest – Ferdinand de Saussure was well aware of these relations between language and society and, in consequence of this, had wanted to incorporate linguistics into a general science of signs. For historical reasons the spatial layers were transformed more and more into social strata. The opposition between an official, regulated language form and popular varieties grew into a problem of social rather than geographic distance. The borderline between dialectology and sociolinguistics was blurred. Professor Higgins' localisation of London dialects is a famous literary example of early identification between dialect and sociolect. The position of these varieties in a given society is one of the objects of sociolinguistic research, the indivdual's reaction and behaviour when confronted with them is one of the concerns of psycholinguistics. Whether the members of a society want to eliminate variation in favour of a standard language – which, by the way, has to be defined with scientific criteria – or whether they prefer to accept, or even favour, dialects and sociolects in order to increase the number of possibilities of expression – stylistic, or literary, or other diversity – a sound knowledge of the differentiation they represent is, in either case, a necessary condition for serious contributions within this field. Maps and descriptions, geographic, social and linguistic tests, established by the scholar, are a necessary basis for decisions to be taken by politicians. The same is true for minority groups and their distribution in space and society. A third aspect of the same sociolinguistic approach is the language situation in developing countries and how to handle it. If, for example, a colonial language is to be replaced by one or more native languages, which ones are to be chosen? Applied linguistics can never formulate the laws for societies or social groups, merely describe facts, formulate the general principles and predict the outcome of this or that choice. The study of bilingualism in its linguistic aspect has its given place within the framework of sociolinguistic research just as psycholinguistics has. I have personally taken a very definite attitude to the problem of bilingualism, of minorities and of language teaching in multilingual countries, which is strongly opposed to many of the solutions carried out by politicians in my own country and in others, but I do not want to dwell upon this here. Not all the problems involved in this enormous complex of linguistic variation, and the analysis of them fall within the field of applied linguistics. It is in the intersection between one, or several, of the theoretical fields and practical and extra-linguistic activity that applied linguistics becomes a reality and a necessity, growing out of the mutual influence of one upon the other.

I hope I have been able to illustrate, by means of a somewhat haphazard choice of examples, what I understand by applied linguistics and how I think such a science must be developed in order to do justice to the two concepts included in the two terms (application and linguistics). They necessarily presuppose each other. When undertaken as it should be, research often gives us the clue to our numerous practical problems, without any special effort or intention from the research worker. On the other hand, the practical applications are not primarily intended to yield theoretical contributions to scientific problems, but sometimes do so. It is in my opinion the intimate contact, the constant interplay between theory and applications which characterizes an applied science and which should consequently be the hallmark of applied linguistics.

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# BILINGUAL EDUCATION FOR MAJORITY AND MINORITY LANGUAGE CHILDREN

As a topic, bilingual education has been considered from a wide variety of perspectives – linguistic, educational, psychological, sociological, political, philosophical, historical and legal (see, for example, Centre for Applied Linguistics 1977–78; Spolsky and Cooper 1977). Bilingual education has been discussed in the context of multilingual, bilingual and unilingual environments, in developing and developed countries. It has been described for indigenous and immigrant populations, as well as for minority and majority language groups (see, for example, Bhatnagar 1981; Lord and T'sou 1976; Swain and Bruck 1976). With the multiplicity of disciplinary approaches to the study of bilingual education, and the multiplicity of communities, students, and programs involved, it is not surprising that the consequences of bilingual education frequently appear inconsistent.

One inconsistency that has been noted is that initial education in a second language has led to bilingualism and academic success for some children, while for others it has led to first language loss and academic failure (Swain 1978a). The fact that initial education in a second language has led to bilingualism and academic success in some instances has been used as an argument against mother tongue education for those children whose first language is not the same as that used in the schools. One of the purposes of this paper is to demonstrate that the generalization that education in the first language can be bypassed is invalid, and to suggest that, among other factors, the sequencing of the languages of instruction is important in the development of bilingual proficiency (Swain, in press a). Determination of the appropriate sequencing of the languages of instruction in a bilingual education program will depend, however, on a number of factors external to the school. To link the out of school variables to the linguistic and academic achievements of students in school, the concept of bilingual proficiency will need to be developed.

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I will begin though with an examination of one program – one that has come to be known in Canada as "French immersion" – in which, through initial instruction in an unknown language (French), high levels of bilingualism have been attained at no cost to academic achievement. The reason for looking at this program in some depth is that, in my opinion, there must exist a profound misunderstanding of the origins, nature, and outcomes of the program. Otherwise, the tenuous generalization based on the results of French immersion programs that education in the mother tongue can be bypassed, could not have been made. The Canadian immersion results, for example, are often cited by policy-makers and in the popular press in the United States as evidence that English-only programs should "work" for minority language children. The argument against mother tongue education for children whose language is not that of the school if reinforced by the idea that if children do not know the language of the school, then what is needed is instruction in that language rather than in the mother tongue. Attempting to remedy school language weaknesses if the language of the home is not that of the school through instruction in the children's mother tongue appears counter-intuitive to many policy-makers and educators. But both the immersion data and other data collected from minority language children can be used to demonstrate that these counter-intuitive reactions are ill-founded.

Before discussing these data, it will be useful to describe the Canadian French immersion programs, noting some of the characteristics that distinguish them from many other programs of bilingual education.

C. B. Paulston (1980) has noted that both the existence of a bilingual education program and the form it takes are dependent upon factors in the wider environment. And, indeed, the first French immersion program in the public sector began as a result of considerable pressure and agitation by a group of English-speaking parents in Quebec whose common concern was that their children become highly proficient in French. Their concern about their children's abilities in French reflected the political and economic realities of their environment – that French was being increasingly emphasized as the language of work, and in fact, has since become legalized as the official *langue de travail* in Quebec. At the same time the Federal Government was bilingualizing its services, and the combined impact of the Quebec and Federal governmental policies and rhetoric led to an increased recognition and acceptance among English-Canadians of the value of knowing French. French immersion programs provided parents in other parts of Canada with a solution to their demands that schools improve the teaching of French – the results from the Quebec program having just been published (Lambert and Macnamara 1969; Lambert, Just and Segalowitz 1970). The battle for improved French teaching has been led in community after community across Canada by parents who were actively interested in their children's education, relentless in their search for documentation supporting French immersion education, and articulate in expressing their demands. And, as part of the dominant, majority group (Lieberson 1970), their demands have been heard and implemented. French immersion programs now exist as optional programs in many cities across Canada. In the province of Ontario alone, approximately 28,000 students are now enrolled in French immersion classes at the elementary school level (Swain and Lapkin 1981). Thus, the very existence of French immersion schooling is the result of political and economic forces, and, in practice provides skills important for members of the majority group in Canada to possess.

French immersion education, then, has been fought for and implemented by members of the dominant majority culture in order that their children will acquire skills which will help them to maintain their dominant position in society. As Paulston stated, "we have the unusual situation where the economically dominant group is becoming bilingual, thereto motivated by economic concerns for the future brought about by legal measures and pressures by the other group in political power" (1980:46).

As part of the dominant, majority group, learning a second language does not pose a threat to a sense of personal or cultural identity, nor to the maintenance of the mother tongue (Lambert 1976), although parents wanted to be assured that the development of their children's English language skills would not suffer. Indeed, these parents wanted their children to learn French so long as it was not at the expense of mother tongue literacy or academic achievement (Swain 1978b). The result is that all French immersion schooling incorporates an English Language Arts component as well as instruction in English at some stage of the program.

Thus, it is completely inaccurate to suggest that French immersion education indicates that mother tongue education can be bypassed. Mother tongue education is an integral part of the program, although it is typically not introduced until the third or fourth year of schooling, that is, until about age 8 or 9. Up to that time, test results show that the immersion children's English language skills, as measured by standardized tests, are below those of comparable children educated only in English (e.g. Barik and Swain 1975). Their oral communicative skills, however, were not judged as inferior to their English-educated peers (Genesee, Tucker and Lambert 1975). Once instruction in English reading and writing is introduced, the immersion children quickly catch up and frequently surpass their English-educated peers in some aspects of English language skills associated with literacy, and measured by standardized tests (e.g. Swain, Lapkin and Andrew, 1981).

Even though instruction in English is not introduced until the third or fourth year of schooling in a primary French immersion program, this is not to say that English is not used in school until then. English is used in all out-of-class activities as the program is typically housed in an English school. Also, the children continue to use English in class into the second year of schooling. This is made possible by the fact that the teachers are bilingual in French and English. Although the teachers only speak the target language in class, they make considerable use of the children's home language in the sense that they understand everything the children say to them. Thus, as should be the case in any classroom, the teacher accepts and starts from the existing language and interests of the children. Were the teacher not able to understand the child's language, there could be little meaningful discourse, a crucial element in language acquisition. As Macnamara (1972) has pointed out, knowledge of what is likely to be said in any particular situation will enable the child to guess correctly what the utterance means. This implies that the adult must say the kinds of things the child expects to hear. If the teachers do not understand the child's home language, then there is little likelihood that they will be able to respond relevantly to the child's questions or statements, and of necessity the teachers will be forced to follow a pre-established curriculum that may relate neither to the children's interests nor their linguistic abilities. Immersion education, in effect, provides a supportive environment in which the child's own interests and language are accepted and built upon.

Thus Canadian French immersion programs at the primary level are considerably different from what has frequently been termed "immersion" elsewhere, for example, in the United States where among some groups the term "immersion" for minority children has become synonymous with English-only education (see, for example, Swain, in press b; Burnaby, 1980). The superficial similarity is that in both cases children initially attend school where instruction is in a language other than the home language. But at this point, the similarity ends. The Canadian French immersion programs include instruction in, and about, the first language. Once mother tongue instruction is introduced, it is provided on a continuing basis throughout schooling. Few minority language students enjoy this privilege in public school systems. Yet, given the overwhelming use of the majority language in school and the wider environment, speakers of a minority language constantly face the possibility of the second (i.e. majority) language replacing the first, making provision of education in the mother tongue for minority language speakers considerably more crucial for first language maintenance than it is for majority speakers (Lambert 1976; Hébert et al 1976).

Furthermore, in the French immersion programs, all children who enter the program at the primary level do so with the same level of target language skills – none. This is in contrast to the situation – which in the United States is often referred to as "immersion" – where children who are to learn the target language are mixed together with other children who are native speakers of the target language, a situation for the learner which has been referred to as "submersion", not immersion (e.g. Swain 1978a). Rather than begin on an equal footing with all other classmates as regards the language of instruction, the submerged children find themselves in a necessarily handicapped position which can do little to enhance any sense of self-esteem or permit equality of learning opportunities. Additionally, their teachers may not understand the children's first language, which, it has been suggested, may lead to the teaching of a prescribed curriculum which relates little to the existing interests or knowledge of the children, and certainly offers no possibility for the spontaneous expression of ideas on the part of the children through a language in which they have learned to communicate.

Thus we see that, in fact, the experience of young children in French immersion classes, even though their initial instruction is via an unknown language, has little in common with that experienced by minority language children attending school where instruction is in the majority language. Although Mackey (1970) includes the latter situation as a type of bilingual education in his typology of bilingual schooling, it is difficult to reconcile it with a definition of bilingual education which incorporates into it the development of bilingual proficiency as an outcome of the program. In order for programs for minority language children to produce results equivalent to those of French immersion programs, instruction in the mother tongue for minority language children would be a bare minimum. But when should instruction in the mother tongue begin?

Can the results from research associated with majority language children in French immersion programs tell us anything about what models of bilingual education might be appropriate for minority language children? My conviction is that the immersion data, combined with those from bilingual education programs involving minority language children, indicate an important and significant trend which will in part, help to answer this question.

One particular theoretical perspective of the concept of bilingual proficiency provides a unifying link between the immersion data for majority language children and appropriate formats of bilingual education for minority language children. This perspective has been argued cogently by Cummins (e.g. 1976; 1979; 1980). In his most recent formulation, Cummins (in press a) postulates that there are at least two dimensions relevant to educational settings which underlie an adequate conceptualization of linguistic proficiency.

One dimension relates to the use and interpretation of language in different contexts. Psychologists studying the relationship between language and thought have been led to distinguish between the use and interpretation of language in face-to-face communicative contexts from that where language is used autonomously, without the aid of paralinguistic cues. For example, Bruner (1975) distinguishes between "communicative competence" and "analytic competence," Donaldson (1978) between "embedded" and "disembedded" thought and language, Olson (1977) between "utterance" and "text," and Cummins (1980) between "basic interpersonal communicative skills" and "cognitive academic linguistic proficiency." Communicative competence, embedded language and thought, utterance, and basic interpersonal communicative skills each refer to the use and interpretation of language in situations where it is supported by contextual and paralinguistic cues. The interpretation of meaning is less dependent on the specific linguistic forms used than it is on the expectation and perception of the speaker's intentions and the salient features of the context.

This use and interpretation of language is contrasted with that where the meaning is to a much greater extent found in the text alone, and hence considerably more dependent on the specific linguistic forms used. Linguistic messages therefore need to be elaborated precisely and explicitly. Donaldson argues that different demands are made on the individual in processing language where meaning is autonomously represented. Bruner and Olson argue that the acquisition of skills for processing meaning which is represented in the linguistic forms alone may also have implications for cognitive functioning in general. As Wells (1981) points out, however, these modes of representing meaning are not distinct categories but rather are present to a greater or lesser degree: "varieties of spoken and written language differ only in the *extent* to which they attempt to achieve autonomous and explicit representation of meaning in the form of the message alone" (p. 244).

Thus we find in Cummins' (in press a) model of language proficiency one dimension which he calls "range of contextual support" which is available for expressing or receiving meaning. This dimension is to be thought of as a continuum which extends at one extreme from the context-embedded use of language to the other extreme of the context-reduced use of language. To quote Cummins, the extremes

> "are distinguished by the fact that in context-embedded communication the participants can actively negotiate meaning (e.g. by providing feedback that the message has not been understood) and the language is supported by a wide range of meaningful paralinguistic and situational cues; context-reduced communication, on the other hand, relies primarily ... on linguistic cues to

> meaning and may in some cases involve suspending knowledge of the "real" word in order to interpret (or manipulate) the logic of the communication appropriately" (in press a).

To a considerable extent, formal education is concerned with teaching individuals to process and use those varieties of spoken and written language in which meaning is autonomously represented. Olson (1977) suggests that the ability to assign a meaning to the sentence *per se*, independent of its nonlinguistic interpretive context, is achieved only well into the school years. This process is facilitated through the development of literate uses of language – both reading and writing. Wells (1981) argues "that it is particularly in the *creation* of written text that the individual is made most aware of the symbolizing function of language, and of the power that it has to capture experience so that it may be considered, questioned and modified in the interests of increased understanding and future applications" (p. 254). In essence, learning to read and write aids in making conscious the processes by which language is used to explain, to classify, to generalize, to abstract, to gain knowledge and to apply that knowledge; and thereby, in turn, subjects these uses to more conscious control and manipulation.

Because mastery of the literate aspects of language is an important part of schooling, the antecedents of that mastery are of particular interest. In a longitudinal study of first language acquisition in England in which preschoolers were observed and recorded in their homes and later in school, Wells (1981) found that the extent of the children's own understanding of the purposes of literacy at the time they started school correlated highly with attainment in literacy related skills after two years of schooling. Almost as strongly correlated with attainment in literacy though was the *nature* of the interaction which took place between caretaker and child. It appears that the extent to which caretakers accept, develop and extend children's verbal initiations, that is, the extent to which meaning is negotiated in constructing a shared reality is an important correlate of reading attainment, and of general achievement in school. Socioeconomic status did not differentiate families in this respect. Wells (1979) argues that these interactions teach a child that "one has to modify one's message to take account both of the situation and of the knowledge and purposes of one's listener, and that this frequently requires one to make one's meaning explicit" (p. 85–86), precisely the sort of activity which has been suggested underlies the use and interpretation of language at the context-reduced end of the continuum. This suggests that being able to use language in context-reduced situations grows out of talk at home or in school about everyday events in which meanings are developed and made more coherent through extended conversations (see also Britton 1970; and Barnes 1976 on this topic).

Cummins' model of linguistic proficiency incorporates a second dimension which reflects the developmental aspects of proficiency in terms of the degree of active cognitive involvement in using or interpreting language. One end of the continuum represents communicative activities "in which the linguistic tools have become largely automatized (mastered) and thus require little active cognitive development for appropriate performance" (in press a). The other end of the continuum represents communicative activities in which the linguistic tools have not become automatized and thus require active cognitive involvement. For example, in writing about the acquisition of writing skills, Bereiter and Scardamelia (1981) suggest that the cognitive involvement can be characterized developmentally as the progressive mastery of lower level skills such as handwriting, punctuation and spelling. The automatization of these skills releases more mental capacity for cognitive involvement in higher level planning of larger chunks of discourse.

One can compare this developmental process with, for example, being able to engage in extended discourse in a second language. If basic syntactic, lexical or phonetic tools of the language have not been automatized then, in effect, considerable cognitive activity will be involved in producing a well-formed utterance, rather than in organizing a coherent argument or following a complex discussion. Much of the emphasis in communicative language teaching on getting the message across (Canale and Swain 1980) is an implicit recognition of this code-communication dilemma. By not insisting on accuracy at the level of the code, or in Krashen's terms, by not having to monitor (Krashen 1981), more cognitive activity can be focussed on formulating the content and logic of the message.

One example of the usefulness in understanding test results of the dimension of cognitive involvement demanded by the linguistic activity comes from a comparison of the performance on a social studies test of two groups of English-speaking students who differed in their French proficiency. The students were in grade 4 and were studying social studies in French in one of two different programs: an early French immersion program and a sixty minute-a-day program. Two versions of the social studies test were given, one in French and one in English. Results from the English version of the test revealed no difference in social studies achievement between the groups. Results from the French version of the test, however, revealed a highly significant difference between the two groups in favour of the immersion program students. Furthermore, the immersion group performed in French as they had in English, whereas the sixty minute-a-day group's score, when tested in French, was much lower than when tested in English, even though they had been taught social studies in French (Edwards, Coletta, Fu and McCarrey 1979). These results suggest that the test was more cognitively demanding for the students who were less proficient in French, and that testing in a second language even when the content has been taught in that language is a risk if one wishes to measure accurately achievement in content knowledge.

To sum up, then, Cummins has proposed a framework for conceptualizing linguistic proficiency that includes two independent dimensions. One dimension reflects the degree of cognitive involvement which is necessary for producing or understanding language. The other dimension reflects the range of contextual cues available for using and interpreting language. In addition, Cummins (1980) has argued that the abilities which underlie the use and interpretation of language at the context-reduced end of the continuum are crosslingual. Thus for an individual who is acquiring a second language, learning in the first language to use language as a symbolic system – that is, as a means to gain and apply knowledge using language alone, as well as a means to abstract, generalize and classify – does not limit that knowledge, or function, to only the language in which it was learned. In other words, spending time learning in the language one knows best benefits both languages equally with respect to developing those language-related skills basic to academic progress in our schools.

Now, to return to the issue of bilingual education for majority and minority children, how does this conceptualization of linguistic proficiency facilitate an understanding of appropriate models of bilingual education for each group? By "appropriate" models of bilingual education, I mean ones which optimally develop the educational skills of children in two languages.

The results from the research associated with French immersion programs in Canada (e.g. Lambert and Tucker 1972; Swain and Lapkin 1981), along with other data from minority and immigrant language situations can be better understood and integrated when viewed within the context of Cummins' model of linguistic proficiency.

The evidence from the early immersion data indicates that after several years of schooling in French, in face-to-face play sessions with native French-speaking peers, immersion children interact with ease and naturalness. The children are able to argue in French, to contradict, to play games (including language games), to change topics, to exchange information, to make jokes, to laugh at them, and so on. They behaved as they would if they were playing in English (Szamosi, Swain and Lapkin 1979). But it would be inaccurate to suggest that their French was flawless. It was not, and is not, even at higher grade levels (e.g. Harley and Swain 1978). At the same grade level that the immersion children were demonstrating their ability to use and understand French in face-to-face interactions, the performance of immersion children on a standardized test of French language skills placed them at approximately the 16th percentile relative to the native French-speaking population on whom the test was standardized (Swain and Barik 1976). It was not until about the sixth grade that their performance on a standardized test of French placed them at approximately the 50th percentile in relation to francophones (e.g. Swain, Lapkin and Andrew 1981). This discrepancy between performance in face-to-face interactions and performance on a standardized test of language skills is what would be expected given the "range of contextual support" dimension of the language proficiency framework that has been described. Furthermore, that it takes six to seven years to produce average performance in the second language at the context-reduced end of the continuum is to be noted.

Now, recall that the performance of the French immersion children on standardized tests of English language skills was initially inferior to that of comparable groups of English-speaking students educated only in English, but that once education in the first language was introduced into the curriculum – at the third or fourth year of schooling – the immersion children quickly caught up, and eventually surpassed that of their English-educated peers in some aspects of measured English language skills. The interesting trend to note is that, relative to francophone students, the standardized scores on tests of French language skills of immersion students remained below average until marked improvement was noted on their English scores (grades 4 and 5). It was not until their English scores had improved considerably that their scores on standardized tests of French achievement increased to indicate average performance relative to francophones (grade 6) (Andrew, Lapkin and Swain 1979; Swain, Lapkin and Andrew 1981).

What would have happened had the first language not been introduced into the curriculum is, of course, not known. Perhaps their performance on standardized tests of French language skills would have remained inferior. Data from some minority language settings suggest it might have.

For example, Navajo students in Rock Point in the United States used to be educated in English only, and their performance on standardized tests of English remained continuously below the performance expected for their grade level. In 1971 a bilingual program was set up in which literacy was first introduced in Navajo, from kindergarten through grade 2. After children learned to read in Navajo, they were introduced to English reading. The program through to grade 6 continued to involve instruction in both languages. Students were administered standardized tests of English achievement and the results were compared, among other groups, to those of previous students at Rock Point who had not had bilingual education. Rosier and Farella (1976) who undertook the study, conclude that the

> "Data presented suggest that the effects of continuous bilingual instruction may be cumulative: that while Navajo students who have recently (in 2nd grade) added reading in English to reading in Navajo may do no better on standardized achievement tests than Navajo students who began reading in English, they do achieve better test scores each year thereafter. Nor does the difference seem to remain the same. The students who learned to read in Navajo and who continue to learn through Navajo and English appear to obtain scores progressively higher in English than those who did not. In effect, their rate of growth helps them to achieve progressively closer to the "national norms" in each grade third through sixth, instead of maintaining a "continuously retarded" level of achievement" (p. 387–88).

(See also Hanson 1979; Skutnabb-Kangas and Toukamaa 1976; Troike 1978.)

Although in the Rock Point program, initial instruction was in the first language while in the French immersion program, it was in the second language, both groups showed improved performance in second language literacy-related tasks following first language instruction. Additionally, both groups took approximately six years of schooling to attain average levels of performance in these aspects of second language proficiency.

Some French immersion programs in Canada begin at later grade levels rather than with initial schooling (e.g. Barik, Swain and Gaudino 1976; Genesee 1979). Comparing results from early immersion programs with those from late immersion programs provides a somewhat extreme comparison of the effect of mother tongue instruction followed by second language instruction. In one study (Lapkin, Swain, Kamin and Hanna 1980), two groups of students were compared: one group of late immersion students who began a French immersion program at age 14 and were 16 years old at the time of testing was compared with a group of early immersion students who began a French immersion program at age 5 and were 14 years old at the time of testing. The early immersion students had 100% of their curriculum taught in French in kindergarten and grade 1; 80% in grades 2 to 5; and 50% in grades 6 to 8 totalling over 4000 hours in which French was used as the language of instruction. The late immersion students, on the other hand, had 70% of their curriculum taught in French in grade 8, and 40% in grades 9 and 10 totalling approximately 1400 hours of instructional time in French. The performance of the early immersion students was superior to that of the late immersion students on a test of French listening comprehension (15.0 vs 12.0 respectively). However the performance of the late immersion students was superior to that of the early immersion students on a French reading comprehension test (18.2 vs 14.8 respectively), and was similar to that of the early immersion students on a French cloze test (20.4 vs 19.9 respectively).

Given the growing evidence from researchers such as Carroll (1975), Cummins (in press b), Ervin-Tripp (1974), Genesee (1978), Krashen, Long and Scarcella (1979), and Snow and Hoefnagel-Höhle (1978) that older learners appear to be more efficient second language learners, at least in some aspects of second language learning, these results should perhaps not come as a surprise. But the prevailing belief that young children learn a second language easily and rapidly is difficult to lay aside. However, the distinction which has been made between the abilities which underlie language use and interpretation in context-embedded versus context-reduced situations helps to explain the apparently more rapid rate of acquisition of skills at the context-reduced end of the continuum by older learners. The explanation of the distinction suggests that older learners have already acquired these functions in their first language and can transfer them to the second language task; whereas younger learners not only have to acquire the surface manifestations of the second language but have to develop those aspects of language proficiency associated with the use and interpretation of language in context-reduced environments. It is, for example, one problem to learn to read *and* learn a second language at the same time, and a lesser problem to learn to read a second language when one already knows how to read, and when one already understands the functions reading serves.

The interdependence of language proficiency in context-reduced situations was directly examined in a study we (Cummins, Swain, Nakajima, Handscombe and Green 1981) undertook this past year with Japanese immigrants to Toronto, Canada. It was hypothesized that older immigrant students, whose first language proficiency manifested in cognitively demanding and context-reduced situations was better developed on arrival in Canada, would acquire these aspects of language proficiency more rapidly than younger immigrant students. The use of Japanese immigrant students provided a stringent test of interdependence hypothesis because of the extreme differences between the two languages.

Among the English measures used to test the hypothesis were vocabulary and reading tests, an antonyms test and a sentence repetition test. The Japanese proficiency measure was a standardized test of Japanese widely used in Japan which consisted of four subtests: reading comprehension, usage, recognition of Chinese characters, and critical reading.

Two groups of Japanese students were tested. One group of grade 2 and 3 students was on the average 5 years 9 months old on arrival while the other group of grade 5 and 6 students were on the average 8 years 4 months old on arrival. A regression analysis revealed that appoximately 16% of the variance on the English language measures was accounted for by length of residence in Canada. However an additional 19% of the variance on the English language measures was accounted for jointly by age of arrival and first language proficiency measures, with older children and those more academically proficient in Japanese performing better on the English language measures.

These findings are consistent with those reported above with, for example, Navajo children learning English, where literacy in the first language led to higher levels of proficiency in the second language. They are also consistent with those of Skutnabb-Kangas and Toukamaa (1976) who similarly reported that proficiency in Finnish of Finnish immigrants on arrival in Sweden was important both for the acquisition of Swedish proficiency in cognitively demanding tasks in context-reduced situations as well as for the continued development of Finnish.

Thus the trend indicated from both minority, immigrant, and majority data is that education in the first language does not diminish the opportunity to develop those aspects of second language proficiency that are associated with cognitively demanding tasks in context-reduced situations. Indeed, education in the first language appears to promote precisely those aspects of proficiency which are central to progress and achievement in academic settings. That these aspects of linguistic proficiency are crosslingual (interdependent) negates the argument that to promote academic progress in a second language, education in the second language is the sole means of accomplishing this.

Why then, you might ask, introduce education with initial schooling in the second language as is done in early French immersion programs? And why does it work? It works, in part, because instruction in the first language is eventually introduced. It also works, in part, because the teachers develop second language skills through contextually-embedded situations, building from the needs, interests and ideas of the children as expressed through a language they use fluently. It also works, in part, because most immersion children come to school with the prerequisites to literacy that Wells' study has indicated to be important. However, because of misconceptions about the nature of language proficiency amongst policy-makers and educators, advice is frequently given to immigrant and minority parents at least in Canada and the U.S. that in order to help their children in school, parents should use the school language at home. If their knowledge of the school language is poor, as is the case with many such parents, using it would surely have serious consequences on the nature of interaction between parents and child. The obvious solution based on the theoretical framework of language proficiency and the data presented in this paper is that parents should use the language they feel most at ease and comfortable with when interacting with their children. The basis for the cognitively demanding use of language in context-reduced situations is the nature of the linguistic interaction which takes place, *not* the language in which it takes place.

And why introduce education with initial schooling in the second language as is done in early French immersion programs? The answer is, in part, because the research indicates that early immersion education for majority children leads to the acquisition of second language skills at no cost to the mother tongue or academic achievement for children with low to average IQ as well as high IQ (Genesee 1976), for children with learning disabilities (Bruck 1979), and for children with a wide range of personality characteristics (Tucker, Hamayan and Genesee 1976). Furthermore, in a majority situation where one can get by quite satisfactorily without using a second language, there may be little motivation to learn the language. Where learning the second language is an option which *students themselves* can choose or *not* choose – as is the case for French immersion programs which start after the elementary level – students may choose to spend their time and energy elsewhere. Learning a second language is one of many competing interests, one which may not be perceived as providing sufficient rewards to choose. Course options which are offered in French may not correspond to the students' interests. Even if they do, some students choose to take the subjects in English in order to get a "better" or an "easier" grade (Adiv 1979). Early French immersion students, however, enter into the challenge of learning a second language without an awareness of the challenge. It does not compete with other interests, but rather it is an integral part of school activities.

Having written this paper, I have asked myself why it was so difficult to say the obvious: that is, that early education in the first language provides a solid basis for academic progress in a second language. The answer is, I think, two-fold. First, the obvious is not always obvious: the very fact that for example, in the U.S. decisions are made about children's exit from a bilingual program (cf. Cummins 1980) on the basis of communication occurring in context-embedded situations rather than on their ability to manipulate language in context-reduced situations, and thus potentially limiting their first and second language development is only one indication that the obvious may not be obvious. The very fact that we test children in their second language and accept the results as an indication of their "real" knowledge is another indication that the obvious is not always obvious. And so it would seem that what is obvious needs to be said in many ways and many times.

But secondly, and perhaps equally as important, I do not want what I have said to be misunderstood. In spite of the fact that all the data reviewed underline the importance of first language education, I do not think that for children of a dominant, majority culture, education in the second language should be delayed. The evidence from immersion education for majority language speakers is clear – if second language learning is started early, then neither motivational nor ethnocentric tendencies will prevent its acquisition. On the other hand, if second language learning is started early for minority language speakers, neither motivational nor ethnocentric tendencies will necessarily prevent the loss of the *first* language, which may in turn jeopardize optimal development of aspects of second language proficiency. And so, if bilingual education is to produce bilingual individuals, then the second language should be introduced early for majority speakers and later for minority speakers. And in neither case should the first language be exempt from inclusion in the curriculum.

To conclude, then, the overall message is that schools can create deficits in the linguistic and academic progress made by children through the non-inclusion of first language education. Schools can, however, provide for the optimal linguistic and academic development of children through different formats of bilingual education which take account of the characteristics of the learner and the use of the languages in the wider environment.

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# CAN LINGUISTIC EVIDENCE BUILD A DEFENSE THEORY IN A CRIMINAL CASE?

### *Prologue*

In any description of an actual court case, precautions must be taken to insure the anonymity of the persons actually involved. There are several reasons why this must be the case, including the protection of the participants and the writer, from future indemnification. A problem therefore ensues. How are the participants to be protected? I have removed all references to real people, positions or places from this account. I have further attempted to modify the representation of the event in such a way that it cannot possibly be recognized. The purpose of this paper is not legal or social. It is, quite the contrary, linguistic.

## Introductory

Whenever the FBI gathers surreptitious tape recordings of suspected white collar crime the tapes, audio and/or video, become the primary evidence to be used against the suspected criminal. This procedure places language at the center of the ensuing court case and has, on several occasions in recent years, brought forth requests of defense lawyers for help from linguists in analyzing these tapes (see Shuy in preparation; 1980).

The fact that such recordings are being used more and more in criminal court cases is of tremendous importance to the field of law for the process has the potential for shaking some of the traditions of court procedure. As researchers, linguists have long recognized that self report data are not nearly as compelling or convincing as are primary, actual event data. Before tape recordings were used as evidence, the court had to rely on self report data almost entirely. That is, witnesses to a crime were asked to describe what happened and to remember, to the best of their ability, many of the facts which in normal life they would not necessarily remember.

Linguistic analysis has taken advantage of this instant capturing of the primary event since the very invention of recording equipment. We did this for several reasons. For one thing, language is simultaneously multilayered.

Phonology, morphology, syntax, semantic meaning, pragmatic meaning and discourse meaning all happen simultaneously and are virtually impossible to segment analytically even by the best of observers. Secondly, language goes by so fast that an observer's memory of all the details which make up the communication is simply not adequate. Third, in natural conversation we reach for the *meaning* of the speech, not its component structure. Structure exists to promote our intended meaning but it is so automatically generated and it occurs so rapidly that even the senders of the message can be unaware of what they are doing as they do it. But the structure is there and it can be captured when we use the proper recording equipment.

Now that the FBI has established its policy of indictment based on surreptitious tape recordings, it must also account for the description of this structure by those who are so recorded. Even though defendants may appear to be guilty of commiting the crime for which the indictment has been made, the structure of that act may reveal features which enlighten or explain their actions.

With this in mind, attorneys for defedants accused of bribery, extortion and solicitation of murder have turned, in recent years, to linguists for help in analyzing the recorded evidence to determine what the conversational structure of the recordings might tell them that the average non-linguist may not see or hear. This paper concerns one such case, the trial of Arthur Jones, a businessman from Idaho. I shall begin by explaining that Arthur Jones was tried and convicted of taking a bribe in the winter of 1978. My involvement with his defense began when his attorney asked me to examine the evidence to determine what its structure could reveal that might be helpful to his defense. As is my custom in such cases, I agreed only to analyze the data and to make that analysis available to the attorneys. If they could see any benefit to their case from using this analysis in Jones' defense, I would be willing to appear as an expert witness to present it to the jury. It should be clear, however, that such an appearance would also require me to explain what my analysis found which might *not* be favorable to Jones' case, should the prosecution ask me such questions on cross examination. The attorneys agreed to this procedure and I presented my analysis to them several weeks before the trial began. Although they agreed that they were benefited from this analysis, they decided not to make use of it in the trial and I was never called as an expert witness. The process, however, is instructive and can serve as a useful model for the procedure which has taken place in several previous, following and current court cases in which I have been involved.

As in other criminal court cases in which I have been asked to provide consulting assistance and/or expert witness testimony, my work involved, first, determining the accuracy of the transcripts of the tape recordings used as evidence and then the use of three kinds of analysis: topic analysis, response analysis and referencing analysis.

### *Accuracy of Transcript*

In all court cases involving tape recorded conversation, accuracy of the transcript is an important issue. In another case in which I worked the transcripts were in great error. It is not clear exactly how such transcripts are produced, but one could easily get the impression that they were done by the same typists who produce office correspondence and letters. Many kinds of errors result: mishearings, grammatical corrections, failure to note conversationally important features such as interruptions and overlaps, creative completion of sentences by means of logical extension rather than accurate transcription, misattribution of turns, etc. In one earlier case, the transcript of one 20-minute tape contained 125 such errors, making it less than useful. Interestingly enough, most of the errors could be deemed favorable to the prosecution. In a bribery case I worked on, however, the transcript was amazingly accurate, with only minimal errors even though there were some 4000 pages of transcript of audio recordings involved. Other cases ranged between these two extremes. It is first necessary, then, to assess the state's transcript to determine its accuracy and, if necessary, to produce the defense transcript.

The Arthur Jones transcript contained a minimum number of such errors including the deletion of *that* complementizers, repeated stutter syllables, omission of many pause fillers such as *ah* or *uh* and occasional omission of false starts, and three mistranscriptions of relatively unimportant words.

### *Topic Analysis*

Topic analysis proved to be extremely important in an earlier case I worked on where the question of who introduced the topic of killing people was crucial to understandning of intentionality (Shuy 1981). In this case, the FBI representative brought up the subject of killing on every occassion it occurred. In normal everday talk, conversational participants have the burden of introducing topics in roughly equal amounts. Any conversation in which one participant introduces all or most of the topics, the talk becomes less conversation-like and more interview-like. But even within the framework of topic introduction, certain differentiation can be noted. For one thing, there are at least four types of topics that can occur in a conversation:

1. *substantive topics*: topics which reveal the basic agenda of the conversational partners – that which brought them together in the first place. Such topics answer the question, "Why are we here?"
2. *corollary topics*: topics which are a consequence of the substantive topics. They deal with the details, methods or plans which grow out of the substantive propositions. Such topics answer the question, "How do we carry out the substantive areas?"
3. *transitional topics*: topics which include sequences such as conversational openings and closings but which also provide breaks from the substantive and corollary topics. Small talk, personal affaris, anecdotes serve to provide breathing space between the other topics of a conversation and build intimacy between the participants.
4. *ostensible topics*: topics which serve as the announced or professed reasons for bringing the participants together but which serve, in actuality, only as a cover for the real or substantive conversational agenda.

In the Arthur Jones case, the first useful analysis of the discourse seemed to be topic analysis. Who introduced which topics? Were the topics introduced substantive, corollary, transitional or ostensible? The critical issue here, of course, was whether the businessman or the government agent, Roland Smith, introduced the substantive topics (e.g. those related to exchanging money for influence or favors).

In a previous paper, I have outlined the problems involved in topic identification (Shuy *ibid*). Briefly summarized, criteria for topic identity include sharp semantic shift as well as linguistic structural clues such as pauses, intonation changes and ideosyncratic as well as generalizable topic marking introducers such as *well*, *now* and, the most overt of all, "Now I'd like to switch your attention to x." The first procedure in topic analysis is to mark the topic changes in a tape and to label them in some brief but accurate and convenient manner.

In the Arthur Jones case, one videotape served as the major crucial evidence against the defendant. This tape was of a meeting between Jones and special agent Roland Smith (using the alias, Herb Colier) on August 1, 1977. Earlier on the same tape was a meeting between Smith, Jones' friend, Earl Walker and Hal Sherman, the FBI informant who did most of the arrangements for meetings between businessmen and others who were being investigated and surreptitiously tape recorded by the FBI.

The topic analysis chart for this August 1, 1977 conversation is seen as Figure 1.

Colier opens the conversation by establishing his problem of trying to get some foreign interests established in this country (topic 1), a corollary

| | B<br>1 | B<br>2 | A<br>3 | B<br>4 | B<br>5 | A<br>6 | A<br>7 | C<br>8 | C<br>9 | C<br>10 | A<br>11 | C<br>12 | C<br>13 | A<br>14 | A<br>15 | A<br>16 | A<br>17 | A<br>18 | A<br>19 | B<br>20 | B<br>21 | B<br>22 | A<br>23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Colier** | We've got 2 foreigners | The reason | He's mentioned a figure | Fair statement? | What investing in? | | We can invest anyplace | | Something confused me | | Any questions? | | | Everything worked out? | I'm kind of a little | Give you something | Seemed you didn't trust me | I'm gonna take care of Earl | Only you and I | | Phone numbers | You have the option | I wanna make sure |
| **Jones** | | | | | | I'm not involved | | This office nice looking | | Cigars | | Talk with Earl | Cigars | | | | | | | Friend in Idaho | | | |

substantive topics = A

corollary topics = B

transition topics = C

Figure 1: Topic Introduction and Recycling.

followed by a discussion about why Jones might want to get involved in such a plan (topic 2). The first substantive topic (as defined by Colier's purpose in having the meeting) is topic 3, in which Colier notes that the foreigners have mentioned the figure of $100,000 with $25,000 up front. In topic 4, Colier offers that if what he has said is no true, the conditions will change, presumably to Jones' benefit and he ask Jones if this is a fair statement. In topic 5, Colier asks Jones what he might recommend for the foreigners to invest their money in. Beginning to sense something awry, Jones then introduces the topic that he is not involved in this. Colier then dangles the carrot a little more with a veiled threat to go elsewhere with his clients. At this point Colier's telephone rings, interrupting the conversation. After he hangs up, Jones introduces topic 8, a transitional comment about the office they are in. Colier's response leads him to topic 9, an attempt to get Jones to clarify his position. Jones' response is to change the subject entirely (topic 10), cigars, obviously a small-talk transitional topic.

Recycling the money topic for the second time, Colier then asks Jones if he has any questions about it (topic 11), to which Jones responds that he wants to talk with Earl Walker privately (topic 12) interrupting the conversation for the second time. After the interruption, Jones introduces the transition topic of cigars (topic 13) but Colier redirects it to the money topic (14) to which Jones' vague response causes Colier to recycle it again as topic 15. Jones responds off topic so Colier recycles it again as topic 16. The fact that Colier recycled the topic is evidence that Jones had not provided the response which, from Colier's point of view, was adequate. Again Jones provides an off-topic response so Colier recycles it again as 17. The same thing happens again so Colier recycles it again as topic 18. Jones' effort to redirect the topic forces Colier to recycle it once again as topic 19. At this point, Colier takes out the $25,000 and Jones pockets it. The following three topics are all procedural, corollary topics (20,21,22). Topic 23 is one last effort by Colier to get Jones to make statements which evidence commitment to the bribe procedure. But Jones' answers are vague as to what he has agreed to.

To this point the video tape has made it very clear that Jones has accepted the $25,000. But it is also clear that in terms of topic introduction, Colier has introduced every bribery discussion (topics 3, 7, 9, 11, 14, 15, 16, 17, 18, 19 and 23). Jones has introduced one money topic, but it was a denial that he was involved in it (5). Figure 2 illustrate the topic introductions of both speakers.

| *Colier's Topics* | *Topic Number* |
|---|---|
| Investment possibilities in Jones' business interests | 1, 2, 4, 5 |
| Procedures | 21, 22 |
| Money Offers | 3, 7, 9, 11, 14, 15, 16, 17, 18, 19, 23 |
| *Jones' Topic* | |
| I'm not involved in financial aspects | 6 |
| Transition topics (house, cigars) | 8, 10, 12, 13 |
| Investment Potential for his area | 20 |

Figure 2: Topic Introduction

It is clear from this analysis of topic introduction and recycling that the efforts to discuss the exchange of money for influence or services are all Colier's. 17 of the 23 topics are introduced by Colier, indicating, not surprisingly, conversational control. Jones brings up only one substantive topic, a denial of his involvment, and one corollary topic related to the investment potential for his area. His only other four topics are small-talk transitional topics. If an observer can conclude anything from such an analysis of topics it is that the agenda of Colier was not only to get Jones to agree to use his influence to get the interests of the foreign investors into the U.S., but also to agree to accept $25,000 for doing so and to accept it at that very meeting. The agenda of Jones is not so clear from the topics he introduced. His topic introduction is assertive on only two occasions: once when he denies that he is involved (topic 6) and again, after accepting the $25,000, when he brings up the investment potential in Idaho (topic 20). Perhaps more significant is the *absence* in his conversation of the topic of receiving money for influence or favors.

### *Response Analysis*

Once a topic is introduced, conventional rules of conversation require that the other party make comments, preferably related to what has just been said. In reality, however, conversational response has a number of options that can be selected:

1. *Resolve topic.* The respondent can agree or disagree with the proposition of the person who introduces it, resolving it either way. Or the respondent can answer the question in such a way that the topic is resolved.
2. *Resolve part of topic.* The respondent can agree with, disagree with or answer a part of the proposition of the other party, leaving other parts of the topic unresponded to and unresolved.
3. *Request clarification or amplification of topic.* The respondent can defer response and resolution until further information is provided.
4. *Provide off-topic response.* The respondent can provide a response to the topic which is not directly or indirectly relevant to it.
5. *Change or redirect the topic.* The respondent can choose not to discuss the topic by responding in such a way that the topic is avoided or denied.
6. *Provide vague, ambiguous or no response.* The respondent may intentionally offer vague or ambiguous responses in order to evade answering, to avoid commitment or resolution, to deceive, to keep all options open or to string along the conversational partner. Alternatively, a vague or ambiguous response may be only an unintentional problem of conversational competence. The respondent may also offer no response at all.
7. *Provide clarification which denies or changes the premise of the topic.* In a response to a topic, a speaker may offer new information on that topic which does not resolve it but which changes the topic's basic structure.
8. *Deny the premise of the topic.* The respondent may not choose to offer new information which changes the premise of the topic; instead he/she

may simply deny the premise of the topic without clarifications, modifications or additions.

In a conversation such as the one in question, where one party introduces most of the topics and thrusts his agenda on the other party, the analysis of the second party's responses is particularly important. Of particular concern in a criminal law case is the resolution of topics. To understand resolution we first need to identify the topics to be resolved, the responses to these topics, and then to determine the ways in which these responses either resolve or fail to resolve the topics. By now it should be clear that the crucial topics to be resolved are the substantive topics, in this case, those involving the exhange of money for favors or influence. Of less concern are Jones' responses to resolution of corollary (how to do it) or transitional (small talk) topics. Figure 3 presents Jones' responses to Colier's substantive topics, those involving money for influence or favors. Keep in mind that the verbal resolution to Colier's topic would be for Jones to agree to accept money for such favors.

| *Topic* | | *Response* | *Resolution* |
|---|---|---|---|
| 3 | He's mentioned a figure "$100,000, $25,000 up front" | No response | 0 |
| 9 | Something confused me "I was under the impression we were talking about $100,000 for you to handle this." | "Keep talking" then changes subject to topic 10 (cigars) | 0 |
| 11 | Any questions? | 0 | 0 |
| 14 | Everything worked out, right? | Yes I understand the thing. I think it's a good arrangement. I'm glad to be associated with you. Let's do it. | 0 |
| 15 | I'm kind of a little . . . | (interrupting) well don't be. I mean you and I gotta ah . . . gotta learn to talk to each other. (changes topic) | 0 |
| 16 | Give you something . . . tonight | "simply deal with Earl about it" | 0 |

|  | *Topic* | *Response* | *Resolution* |
|---|---|---|---|
| 17 | Seemed to me . . . you didn't trust me. | "I'm gonna do Earl favor." "I'm poor." "Lot of ways to do it." "We have got the thing worked out." "Let's go forward." | 0 |
| 18 | I'm gonna take care of Earl anyway. | "I don't understand." "Let's talk about it some" (It's) complicated for me to start dealing in money. | 0 |
| 19 | Only you and I involved "If you're looking for security I thought that was the best way." (pulls money out of drawer) | I think so too<br>How much is that? | Agrees that this is the best security (takes money) |
| 23 | I wanna make sure you're gonna do it now, OK | "We'll go the route . . . whatever it takes." "You need to do what you gotta do." | Unclear |
|  | OK, if that includes the introduction of the legislation . . . | Everything includes everything | Unclear |
|  | OK . . .as soon as this thing is implemented . . . I'll give you the other $75,000 | All-right<br>It's a deal. | Agrees to future condition |

Figure 3: Response/Resolution Chart; Substantive Topics

At this point, things do not look very good for Jones, despite his verbal strategies to avoid or change the topic up to topic 19. He is shown on camera receiving the money and putting it in his pocket but his responses do not seem to back up his actions. To topics 3 and 11, Jones was silent. To topics 9 and 15 he changed the subject. To topic 14, his response was vague to the extent that it is unclear what *it* refers to and what *the arrangement* actually is. To topic 18, he requests clarification. To topics 16 and 17, Jones provides clarification which denies or changes the premise of the topic, shifting Colier's financial arrangements from himself to Earl. Even in topic 19, when the $25,000 was exchanged, Jones' verbal responses do not resolve the topic. He agrees that the two of them alone in one room is the best security and he requests clarification about the amount of the money Colier has pulled out of a drawer. If this conversation had been audio-taped rather than video-taped, we would have only Colier's word that money had been exchanged.

In topic 23, the concluding conversational topic, Jones' words were vague. It is not specified exactly what "go the route" means or what he really means by "everything includes everything." He does appear to agree that once the favor is implemented, someone will agree to meet and accept $75,000 more.

Although Jones did receive the money, we have relatively little verbal evidence to support his action. In contrast with some of the other cases where financial negotiation between the parties took place, Jones is in the peculiar position of receiving money which he does not verbally agree to receive. Is he simply clever with words? Is he an incompetent conversationist? Did he suspect that they were being tape recorded but not suspect video? Or was there still something else going on?

### *Referencing Analysis*

These questions led me to examine topic 19 even more fully. The key to understanding this part of the conversation seems to reside in the referencing system used by both speakers. Any conversational analysis must take into account not only what is said about what by whom to whom but also *what is understood* by whom about what is said to whom. What we must deal with here is Jones' understanding of what Colier is saying, not just Colier's understanding of what he is saying.

It is clear from the conversational evidence used in this case that Jones wants any payment to go to Earl Walker, not to himself. Nine bits of evidence support this position internally in the text, as follows:

1. Before Jones enters the room which is being video taped, a conversation between Hal Sherman (the FBI "arranger") and Earl Walker took place (also in video tape and also offered by the FBI as evidence). Earl states to Sherman over an over again that Jones won't take any money but that the money should be given to him (Earl Walker). Walker agrees that it would be alright for Colier to hand the money to him (Walker) in front of Jones and Sherman agrees that this is how they will do it. Sherman also agrees that the additional money, after the favors have been accomplished, be delivered to a Herman Walsh.
2. In topic 3, Colier states, "Now ah, ah, he's mentioned a figure to us,

OK? He mentioned $100,000 ... and, ha, we've discussed a $25,000 up front, and then $75,000 at the time something's introduced, OK?" This reference to previous discussion of how the money will be offered is consistent with what Jones knows to be going to Earl Walker.

3. In topic 4, Colier asserts that if what he is saying about the financial arrangement is not true, there will be x-number of dollars more. Jones understands this to be fair to Walker and agrees that it is a fair statement. Colier then turns the conversation to the investments that the foreigners will make in Jones' part of the country. During this topic (topic 5) Jones gives a series of short word responses ("un-huh, It is, OK, uh huh, uh huh, OK, I got you," etc.), then explains in topic 6, that he is not involved with it:

   > "The ... the situation that ... that exists that's ah some kind of business transaction you've got with somebody, but here's here's what the thing is, ah, ah, ah, Earl and these guys are my friends ... So this thing this thing will ah be helpful to me and ah, ah, maybe, a, a, a down the road sometime you can do me a favor. But in the meantime, whatever these guys are doing is alright but I got no part in that."

4. In topic 9, Colier says

   > "... something kind of confused me. I was under the impression that we were talking about a figure of $100,000 for you to handle this now and ... am I wrong? ... that was the figure Earl gave us."

   To this, Jones responds "yes." The recency principle of conversational response indicates that Jones was replying to the most recent question and thus indicating that this was indeed the figure that Earl gave them. Such a response is consistent with preserving the idea that the money was for Earl.

5. In topic 14, after Jones returns from his discussion with Earl outside the room, Colier asks if everything has been worked out. Jones replies:

   > "... no problem ... I understand the thing ... its a very good arrangment. Let's do it."

   In this response, especially since Jones had just talked with Earl, "the thing" quite likely refers to Jones' continuing understanding that Walker will get the money. If that is true, then "Let's do it" mean something like "Let's go ahead with the plan I understand to be in place."

6. In topic 16, Colier says that he was under the impression that he was going to give Jones something tonight. Jones responds, "That's right," agreeing that Colier had this impression. That Jones disagrees with the proposed action, however, is clear from his following words. "Just deal with Earl about it," corroborating the understanding that Jones has had

from the beginning, namely, that any money goes to Earl. Colier then asks confirmation from Jones that what Jones wants is to give money to Earl. Jones confirms this clearly.

7. In topic 17, Colier explains that he was going to give Jones the money. Jones then replies that he is very poor but explains that any help he can get would be through "the investment thing." Then Jones says, "... so I think that we have got the thing worked out and everybody's happy so let's go forward with it." "The thing" here is a three part proposition wich Jones understands to have been agreed upon from the beginning:
   a. Jones will introduce favors on behalf of the foreigners.
   b. Earl Walker will get any money for this.
   c. Jones may get investment returns on the foreigner's investments in Idaho after they enter this country.
8. In topic 18, Colier says, "I don't wanna give him (Earl) money that's not for you cause I'm already going to take care of him." Jones' response is "I don't understand about that," which is not surprising since Colier must have mispoken here, probably meaning, "I don't want to give him money that's for you." It is possible, however, that Jones did not even catch this speech error of Colier and when he expressed lack of understanding. Jones probably meant that he, until now, had not heard of any additional money for Earl. Jones' later reference to "This other arrangement" (in the same topic) supports this notion. Jones then requests information about this other arrangement and concludes, "... it's a very complicated thing for me to start dealing in money."
9. It is in topic 19, however, that the referencing system differences between Colier and Jones begin to break down completely. To this point, Jones has understood that any money will go to Earl Walker. Although Colier has agreed with this, he had pushed further to give Jones money in this meeting. Jones has been firm that this will not be the case.

Topic 19 contains two different speaking styles. A conversational style introduces and concludes the topic but a narrative style takes up the bulk of the topic in the middle. All the rest of the tape has been in conversational style except for the four minute narrative style here.

This style change is very important because it signals a change in pronoun referencing. When people who are trying to be intimate and casually narrate past events, they often use the "historical present" tense. This means that all verbs of narration are made present tense, even though they describe past events. Thus Colier says "I says" for "I said" 19 times in this short passage. Along with the shift to the present tense verb there is also, in the historical present tense, a shift of pronoun references. A person who would be referred to as *he* or *him* in regular present tense conversation is transformed, in the historical present tense, into present time and is referenced by *you*. Thus Colier, in narrating to Jones his earlier conversations with Earl Walker, refers to Earl as *you* (and *your*) in this passage 12 times. Since *you* is the pronoun for Earl, this leaves *he, him, his* and *himself* for reference to Jones during this narration (10 times). To complicate matters even more, Colier slips into the past tense verb, *said* on one occasion, therefore using *him* to refer to Earl.

Colier's use of the historical present tense is critical here for two reasons:

a. It enables Colier to rehearse Jones on what he wants the businessman to do by couching it in a story presumably between Colier and Walker. Jones cannot object to what these two are reported to have said to each other, especially regarding financial arrangements, since he was not a part of this conversation.
b. Colier's use of the historical present tense with its accompanying switch of pronoun references makes very confusing one critical topic, the one in which the money was exchanged (19):

*Colier:* OK, say w ... we'll, we'll work it out any other way the businessman wants. I says, ya know, to make himself feel better ...
*Jones:* sure (interrupting).
*Colier:* ... and I thought the best way of doing it was one on one between you and I. Now to me that sounds like it was the ... if you're looking for security, I ... I thought that that was the best way of doing it.
*Jones:* I think so too.

In this passage, Colier's use of *I says* is his 18th use of the historical present. Since *you* has referred to Earl in all other previous references, it is reasonable to conclude that Jones understood these *you* and *you're* pronouns to refer to Earl Walker also. One can conclude, in addition, that this is why Jones agrees that one-on-one is the best way, e.g. since it is one-on-one between Colier and Walker.

Again, almost immediately after the above passage, we hear:

*Colier:* ... that's why I told him I says, I thought it'd be easier if I gave it to you, myself ...
*Jones:* I agree.

Since *told* is in the past tense, *him* is a reference to Earl but then Colier switches to the historical present again with *I says*, making the following *you* also refer to Earl. What does Jones agree to? It is consistent with the historical present tense which governs this passage that Jones again agrees that it is best for Colier to be one-on-one with Earl Walker, a position which Jones has understood to be the case from the beginning.

Immediately following, Colier continues:

*Colier:* ... and then he could never say that ah, he could never be in a position to say, well he ... he gave it to me and then I passed it on to him. Now you got three people. My way of thinking was, there's only two people involved now, you and I.

Following the logic of pronominal reference in the historical present tense, the first two *he* pronouns refer to Jones since the floor of this reported conversation was between Colier and Walker. The second two *he* pronouns (stuttered, but actually serving as one) refer to Colier, since it was, hypothetically, presumably Jones talking about Colier giving the money to Jones (*me*) and he, Jones (*I*), passing it along to Earl Walker (*him*). The logic if this referencing leads ut to conclude that the final *you and I* refers, at least in Jones' mind, to Walker and Colier. Rewritten, with noun substitutions for historical present tense governed pronouns, the above passage would read as follows:

*Colier:* and then Jones could never say that ah, Jones could never be in a position to say, well Colier Colier gave it to Jones and then Jones passed it on-to Walker. Now you got three people. My way of thinking was, there's only two people involved now, Walker and Colier.

### *Conclusion*

There can be no question about whether or not businessman Jones received $25,000 from FBI agent Roland Smith, acting under the alias of Herb Colier. The camera shows it clearly. There is considerable question remaining, even after the jury has convicted him, about what Jones thought was going on even at the time he received the money.

Jones does appear to have agreed to introduce favors that would permit the foreigners to do business in this country. He also agreed that it would be beneficial if the foreigners would, in return, invest heavily in this businessman's home area. He further admitted that any financial reward he might obtain would be by means of such investments. In response to Colier's continuous efforts to get him to accept money on the spot, Jones used a number of conversational strategies to say no (he was silent, he denied his involvement, he changed the subject, he requested clarification and he answered part but not all of the topic propositions). Appearances of agreement or resolution to Colier's money pushing efforts can be seen in Jones' responses to topics 14 and 23. Yet when we see Jones' understanding of the arrangement in contrast to Colier's understanding, we can conclude that Jones' "Let's do it" in topic 14 refers to Jones' set of premises rather than to Colier's, as follows:

Premises

| *Jones* | *Colier* |
|---|---|
| 1. Jones will do favors on behalf of foreigners. | 1. Jones will do favors on behalf of foreigners. |
| 2. Earl Walker will receive any money from this. | 2. Jones will receive money from this. |
| 3. Jones will receive returns on foreigners' investments in Idaho | 3. Jones will receive returns on foreigners' investments in Idaho |

It was imperative to Colier, if his mission was to be successful, that his own premise number 2 be carried out. From his topic introduction and recycling, it is clear that this was Colier's major goal. He was less concerned, of course, about premise number 3. Jones' emphasis was quite different. Number 3 was most important to him personally. He was aware that number 2 is crucial and, quite possibly, he believed that even at the end of the meeting he had carried it out.

But why did he take the money if he thought it was for Earl Walker? Possibly because he thought it was for *Earl Walker*. Taking into account Colier's use of the historical present tense which was used during the bulk of this topic, Jones' taking the money, though in some ways foolish, is consistent with the words of both Colier and Jones. And we must also account for the fact that Jones never sought out money in this conversation (in fact he avoided discussion about it and denied his involvement in it) and that he repeatedly observed that any money should go to Walker. Accounting for the pronoun shifting that accompanies the historical present tense, Jones could easily have believed that when Colier pulled the money out of a drawer and handed it to him, he was taking it on behalf of Earl Walker, who was sitting in another room at the time. Jones never says "Thank you," "I've got it," "it's a deal" or anything like that after clearly accepting the cash. Instead he leashes into a long discourse about opportunities for investments in Idaho. It is as though, having taken care of his premise number 2 on behalf of Earl, he can now move to his own interest, potential investments in Idaho businesses. Then they exchange phone numbers and the phone rings for a second time, undoubtedly another FBI agent who was watching it all from another room. They finish their phone number exchange and then Colier, probably responding to his fellow agent's request in the phone, tries to elicit, once again, the sort of verbal acceptance from which has eluded him all along:

*Colier:* I just wanna make sure that a you're you're gonna do it now OK . . .

*Jones:* No problem.

*Colier:* . . .you you will carry out the favors?

*Jones:* We'll do whatever whatever, we'll g. . . go the route to get it done.

*Colier:* OK

*Jones:* Whatever that takes . . . And it doesn't make any sense to do any more than you have to . . . but you need to do what ya gotta do.

*Colier:* OK, if that includes the implementation of the favors, that's I I that's what we'll do.

*Jones:* It includes . . . e . . . e . . everything includes everything.

*Colier:* . . . as soon as this thing is is implemented, we're ya know, we'll arrange ah a meet someplace ah wherever you say, wherever you want it . . . and ah I'll give you the other $75,000.

*Jones:* Alright

*Colier:* OK

*Jones:* It's a deal.

At this point, Colier apparently believes that he has elicited the words he needs and the conversation comes to a close. But has Colier elicited the convincing words? When Jones agreed to "go the route," "to do what ya gotta do" and when he observed "everything includes everything" did he agree to implement the favors? Possibly, but not positively. And when Colier said that he'd meet in the future to "give you the other $75,000" can this be irrefutably tied to Jones? Could Jones have understood this *you* to *you* plural as opposed to *you* singular, an understanding which is consistent with his receipt of the $25,000 on behalf of Earl Walker?

The jury saw it all one way. They convicted Jones of taking a bribe. The analysis which I have represented here was solicited by Jones' defense attorneys but was never used in the trial. Instead, the attorneys decided to build a defense theory along totally different lines. To admit that Jones may not have understood what was happening to him with the use of the historical present tense was not accepted by the defense lawyers in this case. They probably felt that such misunderstanding was inconsistent for someone of Jones' stature. I don't think so. I am not to determine, of course, whether he was innocent of guilty. But the linguistic analysis shown here at least allows for alternate possibilities. More important, I believe that it shows that a defense theory can be built out of linguistic evidence.

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# THE "FUNDAMENTAL PEDAGOGICAL PRINCIPLE" IN SECOND LANGUAGE TEACHING

This paper discusses one idea, a principle that may be the most fundamental in the field of language teaching and language acquisition. It has clarified many aspects of theory, pulling together what had appeared to be very different phenomena under one explanation, while also making predictions for practice that so far seem to be verified by research.

This paper has three parts. First, I briefly review the theoretical background necessary for an understanding of the "Fundamental Principle". This section concludes with a statement of the principle. In the second section, several issuses in second language acquisition theory are examined, such as the role of instruction and the effect of age. I will attempt to show here how the fundamental principle sheds light on each of these issues. Finally, I discuss the impact of the principle on pedagogy ("The Fundamental Pedagogical Principle"), both in terms of traditional language teaching, as well as alternatives and supplements to the classroom.

## Theoretical background

The theoretical background for the Fundamental Principle can be stated as five hypotheses. Since these hypotheses have been discussed extensively elsewhere (Krashen 1980; 1981; in press), I will review them only briefly here.

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### *1. The Acquisition-Learning hypothesis*

This hypothesis claims that we have two independent means for developing ability in a second language. *Acquisition* is a subconscious process, similar to first language acquisition, and unaffected by error correction. *Learning* is conscious knowledge about language. Error correction and explicit instruction are aimed at learning. In ordinary language, acquisition is "picking up" a language, while learning is called "rules" or "grammar". The evidence for this disctinction is indirect; the distinction is extremely useful for the hypotheses that follow.

### 2. *The Natural Order hypothesis*

The Natural Order hypothesis claims that grammatical structures are acquired (not learned) in a predictable order. Certain structures tend to "come" early, others later. In first language acquisition, Brown (1973) was the first to hypothesize a natural order. In second language acquisition, it was first suggested by Corder (1967), while Dulay and Burt (1973) provided the first empirical evidence. The natural order appears to be independent of the order of presentation of items in the classroom (Turner 1978). Our work with English (summarized in Krashen 1981) suggests that the first and second language orders are different (but see van Naerssen 1981), but there is some similarity, especially with respect to bound morphology.

The reliability of the natural order phenomena in English morphology is well established (see e.g. Makino 1980; Christison 1979; Long 1980; in addition to the studies cited in Krashen 1981).There has, however, been some debate over this hypothesis, concering whether the order was an artifact of a single testing instrument (Porter 1977), whether cross-sectional orders were the same as longitudinal orders (Rosansky 1976), and whether individual variation is so extreme so as to make group orders meaningless (Rosansky 1976). I have attempted to respond to each of these criticisms, presenting evidence to show that we get natural orders with many different testing instruments, including free speech (Krashen, Houck, Giunchi, Bode, Birnbaum, and Strei 1977), that cross-sectional and longitudinal orders are not significantly different and that individual variation reduces to manageable proportions as long as a (surprisingly small) minimum number of each grammatical item is included in the analysis (Krashen 1981).

Some issues remain. Some critics have pointed out that the natural order is based on only a few points of morphology. This is, of course, not disproof, and it is not entirely true. While a larger data base is called for, in Krashen, Sferlazza, Feldman and Fathman (1976), we examined twenty structures and found a natural order. Also Turner (1978) studied a variety of structures, as did van Naerssen (1981) in Spanish. Scarcella (forthcoming) has presented evidence for a natural order for the acquisition of discourse in English as a second language.

Still another objection is that order studies ignore the development of a structure and focus only on the emergence of mature forms. These scholars focus their attention on developmental or intermediate forms, the predictable errors acquirers make en route to acquiring a form or structure (see e.g. Wode, Bahns, Bedey, and Frank 1978). I do not interpret this as an objection but simply a different focus. In fact, intermediate forms can be considered as part of the natural order phenomenon. These scholars have shown that acquirers pass through similar stages in language acquisition, and have found similarities across acquirers with different first languages and of different ages (see below for further discussion of first language influence and age). This data is reviewed in Dulay, Burt, and Krashen (in press).

### *3. The Monitor hypothesis*

This hypothesis specifies what acquisition and learning do in second language production. It assigns acquisition the central role, claiming that it is acquisition that is responsible for our fluency in second languages. Learning has only one function – it acts as an editior, or Monitor. When we speak a second language, the forms we use come "first" from our subconsciously acquired competence. We then attempt to apply conscious rules, sometimes before we speak and sometimes not, sometimes sucessfully and sometimes not.

When the Acquisition-Learning hypothesis and Monitor hypothesis were first formulated in 1975, my impression then was that both acqusition and learning were important, perhaps of equal importance, and, it seemed to me, many programs did in fact assign them equal weight, offering both "conversation" and "structure". As fair-mined as this sounds, it now seems to me to be incorrect. Acquisition appears to be far more important and learning very limited. These limitations can be expressed as conditions that need to be met in order to use the Monitor, the conscious grammar, effectively:

1) **time**: The performer must have enough time to access and use conscious rules. Most people cannot do this effectively in normal conversation without interfering with communication. Monitor use while talking may result in hesitancy, and/or in not listening to one's conversational partner while planning. (I should point out that some writers explicity advise this kind of "advance planning" while others (Rivers 1979) claim that they can easily focus on form without impairing fluency. I would like to suggest that performers who can get away with this sort of thing are unusual. Those who advise it are usually professional linguists or language teachers, who know the rules well (and review them every semester) and who have special talents, talents which I do not think are shared by many people. It may also

be the case that those who monitor while speaking are, in reality, only monitoring one or two low level rules per sentence, or less.)

2) **focus on form**: Even if performers have a great deal of time, they may not use their conscious grammatical knowledge. They may be more concerned with communication than with formal accuracy. This "thinking about correctness" condition is thus independent of the first condition (Dulay and Burt 1978).

3) **know the rule**: Linguistic research has taught us that this is a difficult condition to meet! Linguists concede that they have described only fragments of natural languages, and only a few languages have been worked on to any extent. Teachers, and of course students, have access to only a fraction of linguists' descriptions.

These three conditions place tremendous limits on the use of conscious grammar, and all three must be met to allow effective grammar use, and even this is no guarantee; the three conditions are necessary but not sufficient.

The experimental research supporting this hypothesis (the "morpheme" studies) reveals one simple effect: when adult performers do not monitor, their error patterns are "natural", that is, they show a cross-sectional difficulty order similar to the natural order. When all three conditions are met, as in a discrete-point grammar test, the error patterns are no longer natural. My hypothesis is that they are rendered unnatural by a rise in rank of items that have been learned but are not yet acquired (in English as a second language, this includes items such as the third person singular and regular past morphemes). I interpret the natural order found in Monitor-free conditions as a manifestation of the acquired system working without the conscious grammar. The rise in rank of certain items is interpreted as the intrusion of the Monitor. (For a review of these studies, see Krashen 1978).

To look ahead to the pedagogical conclusions, the implication of this hypothesis is that the study of grammar has a place, but it is a limited one. Application of conscious rules can raise formal accuracy somewhat. Second language performers can correct from seven to 50 percent of their own errors, depending on the conditions and the student (see chapter four of Krashen, in press, for a review of these studies), and raise overall accuracy about five to ten percent (Krashen, Butler, Birnbaum and Robertson 1978). The errors that the Monitor can deal with tend to be those that Burt and Kiparsky (1972) term "local" errros, but their correction is not unimportant, as long as it does not interfere with communication.

As McLaughlin (1980) has pointed out, this hypothesis deals only with second language production. While data is lacking, I think a reasonable hypothesis is that listening comprehension relies nearly entirely on acquired competence, due to time constraints.

### *4. The Input hypothesis*

According to hypotheses (1) through (3), acquisition is far more important than learning in second language performance. If this is so, the crucial question is then: How do we acquire? Stated in terms of the natural order hypothesis, we can ask how we move from one stage to another, from stage 3, for example to stage 4, or, more generally, from stage i, our current level of competence, to stage i + 1, the next stage the acquirer is "due" to acquire, or ready to acquire.

The Input hypothesis says that we acquire by understanding language containing i + 1, that is, we move from one stage to another by understanding language that contains structures at that level, a bit beyond where we are now. It says that we acquire structure by understanding messages and not focussing on the form of the input, by "going for meaning". We can understand language that contains structures we have not yet acquired by utilizing context, extra-linguistic information, or our knowledge of the world. In beginning second language classrooms, for example, context is often provided via visual aids (pictures).

Our usual approch to second language teaching has been very different. As Hatch (1978) has pointed out, we assume the opposite: we first teach students structure and then try to give them practice "using" the structures in various activities and exercises. The Input hypothesis, in the other hand, says that we acquire structure not by focussing on structure but by understanding messages.

The Input hypothesis also claims that we can not teach speaking directly. Rather, speaking is a result of acquisition, not a cause, and will emerge on its own over time. The best way to "teach" speaking, according to this view, is simply to provide comprehensible input. Speech will come when the acquirer feels "ready", and this readiness state arrives at different times for different people. In addition, early speech is typically not accurate – grammatical accuracy develops over time as the acquirer hears and understands more input.

The third part of the Input hypothesis is the claim that the best input should not be grammatically sequenced, that is, it should not deliberately aim at i + 1. We are all familiar with language classes that attempt to do this; there is a "structure of the day", and both student and teacher feel that the aim of the lesson is to learn and practice this structure. Once today's structure is "mastered," we can proceed to the next one. The Input hypothesis claims that such deliberate sequencing is not necessary and may even be harmful! Specifically, it hypothesizes that if there is successful communication, if the acquirer indeed understands the message contained in the input, and if there is enough input, i + l will automatically be provided in just the right quantities. The acquirer will receive comprehensible input containing structures just beyond him if he is in a variety of situations involving genuine communication, and these structures will be constantly provided and automatically reviewed. He need not worry about missing a class and thereby missing the past tense forever (or until next year). With natural, comprehensible input, he will hear the past tense marker again and again!

Evidence supporting the Input hypothesis is given in some detail in other publications (Krashen 1980, 1981; in press), but it will be useful to briefly mention two phenomena in second language acquisition that are very consistent with this hypothesis. The first is the presence of the *silent period*, a period of time before the acquirer starts to speak. The silent period is very noticeable in child second language acquisition; six and seven years olds, for example, in a new country may not say anything (except for some memorized sentences and phrases) for several months. The Input hypothesis interprets this as a time during which they are building up competence via input, by listening. When they are "ready", they start to talk.

Adults, and children in formal language classes, are usually not allowed a silent period. They are often asked to produce very early, before they have acquired enough syntactic competence to express their ideas. According to a hypothesis proposed by Newmark (1966), performers who are asked to produce before they are "ready" will fall back on first language rules. Stated more formally, an acquirer will substitute some Ll rule for i + l, a rule of the second language, if the acquirer needs i + l to express himself but has not yet acquired it. The Ll rule used may be quite similar to the L2 i + l, but may also differ in certain ways. When the L1 and L2 rules are noticeably different, the resulting error is referred to as "interference", but according to Newmark, it is not interference at all. It is the result of ignorance – the lack of acquisition of an L2 rule needed in performance.

The substitution of some L1 rule for some i + l has certain advantages. It allows early performance and thus invites input. Also, when the L1 and L2 rules are not noticeably different, the performer seems to have gotten something for nothing. There are serious disadvantages, however. The two rules may be noticeably different, resulting in errors. The Monitor can note and repair these errors in some cases, but not all, since, as we have seen, the constraints on Monitor use are severe. Use of L1 rules requires constant vigilance on the part of the Monitor, and is an awkward way to produce formally correct sentences in a second language. Note also that Monitor correction of such errors will not, according to the Input hypothesis, produce acquisition, or permanent change. It will not eradicate the L1 rule, even if done consistently over long periods of time. Real acquisition comes only from comprehensible input.

An interesting question is whether an L1 rule used in this way can "take the place" of a "real" i + 1, as the acquirer moves along the developmental path. Some recent papers by Hammarberg (1979) and Zobl (1981) speak to this issue.

Use of the L1, then, is a way of performing without competence, of getting around the Input hypothesis. It is implicitly encouraged by many teaching methods, but causes serious problems as a long term mode of language production (for more discussion, see Krashen, forthcoming).

### 5. *The Affective Filter hypothesis*

The final hypothesis to be discussed here deals with the role of "affect". Briefly, the research literature tells us that the following affective variables are related to success in second language acquisition:

1) **anxiexty**: *low* anxiety relates to success in second language acquisition. The more the student is "off the defensive" (Stevick 1976), the better the acquisition.

2) **motivation**: higher motivation predicts more acquisition. Certain kinds of motivation are more effective in certain situations, "instrumental" where acquisition of the language is a practical necessity, and "integrative" where acquisition of the language is more of a luxury (Gardner and Lambert 1972).

3) **self-confidence**: the acquirer with more self-confidence and self-esteem tends to do better in second language acquisition. (For a review if this literature in detail, see Krashen 1981.)

I have hypothesized that these affective factors relate more directly to language acquisition than to language learning, because we see stronger relationships between these affective variables when communicative tests are used, tests that require the use of the acquired system, and when we test students who have had a chance to acquire the language (and not just learn it in foreign language classes). Dulay and Burt (1977) have made this relationship more explicit and clear by positing the presence of an affective filter. According to the Affective Filter hypothesis, acquirers in a less than optimal affective state will have a filter, or mental block preventing them from fully utilizing input for language acquisition. If they are anxious, "on the defensive", or not motivated, they may understand the input but it will not reach those parts of the brain that help us acquire language (the "language acquisition device").

According to this hypothesis, given two acquirers with equal comprehensible input, there may still be variation in rate of acquisition and ultimate attainment in acquisition. The one with the "lower filter" will go faster and farther.

## The Fundamental Principle in second language acquisition

We can summarize the five hypotheses with a single claim: people acquire second languages when they obtain comprehensible input, and when their affective filters are low enough to allow the input "in". In other words, comprehensible input delivered in a low filter situation is the only "causative variable" in second language acquisition. All other factors thought to encourage or cause second language acquisition only work when they provide comprehensible input.

This hypothesis helps to resolve many problems in the professional literature, and we will examine two of them here.

### *The effect of instruction*

Surprisingly, there seems to be little agreement in the research literature as to whether second language instruction is helpful! Some studies (Upshur 1968; Mason 1971; Fathman 1975) present evidence that seems to say that instruction in second languages is not helpful, that the informal environment is superior. Other studies (Krashen, Zelinski, Jones, and Usprich 1978; Brière 1978) say the classroom is either effective or superior to the informal environment. The Fundamental Principle helps to resolve this apparent conflict. We first posit that language teaching helps by providing *CI* (I will use the abbreviation CI henceforth for comprehensible input delivered to an acquirer with a low or zero affective filter; in other words, comprehended input that gets into the language acquisition device). This predicts that language teaching helps just when it is the main source of CI, and also predicts that language teaching will be of less value in situations where a rich source of CI is available outside the classroom. The research confirms these predictions. In those studies showing that language teaching helps, the classroom may indeed have been the only source of CI. In Brière's study, for example, subjects were Indian children in their villages in Mexico, and their main source of Spanish, the target language, was the village school. In Krashen et al, subjects were extension students in New York who were not attending school full time; the ESL class for them may also have been their main source of CI in the target language. In studies deciding against language teaching, in case there was a rich source of CI on the outside, and in every study the students were advanced enough to take advantage of it, i.e. it was comprehensible. In the Upshur study and in the Mason study, subjects were intermediate level ESL students in an American university. In both cases it was shown that additional ESL classes do not help when the subjects are also taking (and apparently understanding) regular subject matter classes. A similar argument can be made for Fathman (1975). Her ESL students had all been in the United States at least one year and were attending public schools in Washington D.C. Their outside sources of input were, apparently, the playground and the subject matter classroom and once again the ESL class made no extra contribution (see also Hale and Budar 1970; and detailed discussion in Krashen, in press).

*Age*

The effects of age on second language acquisition also reduce down to CI. The research supports these generalizations about age and second language acquisition:

1) Older acquirers progress faster in earlier stages (adults are faster than children; older children are faster than younger children), but

2) Children outperform adults in the long run. It usually takes children about six month to one year to catch up to older acquirers (Snow and Hoefnagel-Hohle 1978; literature summarized in Krashen, Long, and Scarcella 1979).

A possible explanation for these findings is as follows: older acquirers are faster because they are better at getting CI! Recent research (Scarcella and Higa, in press) suggests that older acquirers are more proficient at "conversational management." While younger acquirers get what looks to be simpler input, older acquirers (in Scarcella and Higa's study, adolescents as compared to younger children) are better able to make the input understandable – they ask native speakers for help, are better able to "keep the conversation going," etc. In addition, older acquirers can use production strategies that younger acquirers usually do not have. Older acquirers can "beat the system," using first language rules in place of second language rules, as described earlier. While children also show occasional first language "interference," adults appear to be more able to use first language syntax as a strategy, and with their superior cognitive development, are better able to use the conscious grammar to bring their sentences into conformity with second language patterns. This allows a good "learner" to speak in fairly complex sentences very early. While this system has drawbacks, as discussed above, it allows the older acquirer to participate in conversation early, and obtain more input.

An explanation for the child's superiority in ultimate attainment is simply that the strength of the affective filter is sharply increased at puberty – the adult may get sufficient quantities of input, but it does not all "get in." The filter increase at this time is due to the biological and cognitive changes the adolescent is going through at puberty (for detailed discussion, see Elkind 1970; Krashen 1981; in press). Once again, appeal to the Fundamental Principle helps reduce the size of the problem.

We should be able to perform this exercise with any variable that has been shown to relate to second language acquisition. In every case, CI will be the "remote cause" of second language acquisition. For a discussion of other variables ("exposure" and acculturation), see Krashen (in press).

## The Fundamental Pedagogical Principle

The Fundamental Principle applied to pedagogy is as follows: Any instructional technique that helps second language acquisition does so by providing CI. In other words, if *x* is shown to be "good" for acquiring a second language, *x* helps to provide CI, either directly or indirectly.

We first apply this principle to variuos teaching methods, then look at some alternatives. We will see that in each case, the existing research confirms the theoretical predictions made by the Fundamental Pedagogical Principle.

### *Language Teaching Methods*

The Fundamental Pedagogical Principle predicts that what we now term "traditional" methods will not succeed very well, since they supply little CI. Grammar-translation, for example, provides only scraps of CI – a few model sentences, a few (difficult) paragraphs of reading, and exercises in which the focus is on form and not meaning. Teacher talk is often in the students' first language. The dialogues and pattern drills of audio-lingual teaching appear to fill the classroom hour with CI, but in reality do not. They provide the same message over and over, and focus on form. Both grammar-type methods and audio-lingual teaching emphasize early and totally accurate output, a practice which runs counter to the Input hypothesis and often has the effect of raising the affective filter.

The Fundamental Pedagogical Principle predicts that some of the newer methods should do much better. While not always expressed in these terms, the goals of the newer methods are to provide comprehensible input and lower the filter, some focussing on the former (e.g. Total Physical Response) and some the latter (e.g. Suggestopedia).

The results of methods comparison studies are quite consistent with the theoretical predictions. We see little difference between traditional methods (no significant difference for adolescents, a small difference in favor of grammar-type methods such as cognitive-code, for adults, statistically significant but not large), despite their very different assumptions about second language acquisition. My interpretation of this seemingly odd state of affairs is that none of the traditional methods supplies much in the way of comprehensible input. The newer methods clearly outperform the traditional methods when put to the empirical test (for Total Physical Rsponse, see the many studies by Asher, summarized in Asher 1977. For Terrell's Natural Approach, described in Terrell 1977, see Voge 1981. See also Swaffer and Woodruff 1978; Gary and Gary 1981; and the review of studies in Krashen, in press.)[1]

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[1] So called "communicative approaches" (e.g. the Notional-Functional syllabus) appear to promise more than traditional methods. Technically, notional syllabi are just that, syllabi, and not teaching methods, however. Nevertheless, published suggestions on implimentation of notional syllabi sometimes make very traditional assumptions on the nature of the second language acquisition process. They often assume the necessity of grammatical sequencing. Wilkins (1976) assumes that the syllabus designer must make a deliberate effort to include grammatical structures in general courses. They also assume that both grammatical forms and the form-function relationships need to be consciously taught and learned, using production exercises and error correction (see e.g. McKay 1980). While there is no direct evidence that communicative competence is acquired, there are several arguments in favor of the hypothesis that much, if not most aspects of appropriateness are acquired rather than learned. First, as all researchers in this area have discovered, the relationship between form and function is very complex. Wilkins and others have repeatedly emphasized that there is no one-to-one relationship between grammatical form and communicative function; there are many ways of expressing one function and one form can serve many different functions, depending on context. Most foreign and second language students are able to consciously learn only a tiny portion of the grammar of a language (Krashen, in press; see especially chapter four); "learning" communicative competence requires that they also master the rules of language use, the complex ways grammatical forms map onto functions and notions. Second, linguistic research is only now uncovering many rules of language use, which are finding their way into syllabi. Second language users who have mastered these rules before this research took place probably acquired them, unless we want to credit such acquirers with the same ability and interest in linguistics as those who did the research in this area. (One could maintain that second language performers simply did not acquire these form-function rulse before they were described and made available in texts. This is doubtful. See e.g. Scarcella, forthcoming, for research on what second language acquirers can do.)

*Some* aspects of communicative competence are fairly simple and are very useful, and should and can be taught and learned. These include aspects of communicative competence

### *Purpose and Goals of the Classroom*

The research on the efficacy of instruction, the research on method comparisons, and the Fundamental Pedagogical Principle all lead me to the conclusion that the second language class is a very good place to acquire a second language! It is a place where the beginning student, especially the older beginner, can obtain the input necessary for improvement, CI that the outside world is often unwilling or unable to give. In beginning stages, the classroom can, in fact, do much better than the outside world. The beginning older student will understand little or nothing of the speech of native speakers in a new country. Even one hour per day in a language class, if it provides CI, will be far more efficient than the outside world.

The goal of the classroom, in my view, is not to produce native speakers or even error-free second language performance. It is, rather, to develop "intermediate" second language competence, to bring the student to the point where he can begin to understand the language he hears and reads outside the class and thus improve on his own.

### *The Transition Problem and Alternatives to the Classroom*

It isn't always this simple. Students do not always emerge from language classrooms able to understand enough so that they can function on the outside, and it is not clear that more language teaching is the answer. It is difficult to always supply enough CI in a classroom, and difficult to supply CI using a wide enough variety of forms and functions, due to practical constraints and discourse contraints of the classroom, no matter how enlightened the method.

What is necessary is something to help the transition from the class to the real world. According to the Fundamental Pedagogical Principle, such transition activities will supply supplementary CI, CI that the classroom cannot supply, that is still easier to understand than native speaker level language.

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that help in polite and comfortable interaction, that help conversational management (e.g. what Wilkins calls "emotional relations"). In view of the constraints on conscious learning, and the fact that many of these forms will have to be available in real time, only the simplest forms can be taught deliberately, however.

Notional syllabi can be used with methods that aim for acquisition. Terrell's Natural Approach (Terrel 1977), for example, uses a semantic or notional syllabus, but does not insist on productive mastery of all functions and notions in early stages. Perhaps our goals here should parallel those in grammar; we should aim for comprehension, with the help of context, of functions and notions, expect our students to make errors, and prepare them to finish the job of fully acquiring communicative competence on the outside.

We will examine several possible transition activities in the following section. In each case, the Fundamental Pedagogical Principle predicts that the proposed activity is useful, and in some cases there is additional empirical evidence supporting this prediction.

### *Media*

An obvious place to get supplementary input in a second language situation is the media. Is it helpful for a student to listen to the radio and watch television? According to the Fundamental Pedagogical Principle, this is not the correct question. The correct question is: are these sources of CI? The answer depends on what students listen to and watch, and the students' own level of competence. Listening to the radio may not help the beginner; the intermediate may be able to follow certain TV programs, however. The principle predicts that "selective" listening and watching is called for, selective in the sense that students need only listen or watch programs that are at least partly comprehensible and that are of interest.

### *The Language Laboratory*

According to the Fundamental Pedagogical Principle, the language lab is neither inherently good or evil. Its utility depends on the extent to which it supplies CI. It may, in fact, be far easier to use the lab as a means of supplying CI than for other purposes. The usual use of the lab puts a tremendous technological and pedagogical burden on the teacher: the teacher is expected to monitor student output and correct errors. Using the lab as a source of CI is easier. Here are some possibilities: taped stories, with pictures to aid comprehension (Harris Winitz has recently developed some excellent tapes of this kind); class-type lectures, supplemented with notes (on real topics, designed to supplement real classes (see below), not sample lectures on random aspects of chemistry or the history of a pretend kingdom), radio programs, commercials, etc.

In my view, the lab should be a resource, a place to go to get input on a variety of subject matters whenever it is convenient for the student. The old view of the lab, with the vigilant drill master, does not allow this.

### *Subject Matter Teaching*

Another class of alternatives and supplements to the language class involves the use of subject matter using the second language as a medium of instruction. By this I do not mean submersion, mixing second language acquirers in with native speakers. Rather, I mean special classes for second language students, classes in which no native speakers other than the teacher participate, in which teachers make some linguistic and cultural adjustments in order to help students understand.

According to the Fundamental Pedagogical Principle, subject matter teaching will be of use to acquisition only to the extent it is comprehensible. This means that different subjects may be of more use to students at different levels. Cazden (1979) points out that one could make a case that mathematics is ideal for teaching to less advanced acquirers. There is a limited vocabulary, less interactional demand than in some other subjects, and considerable extra-linguistic support to aid comprehension. Students with more proficiency in the second language could handle subject matter more displaced in time and space, that supply fewer concrete references, such as history and literature. The point is that second language students can not only survive in such classes and learn some subject matter, but that they will also obtain CI in the second language.

The Fundamental Pedagogical Principle argues against submersion, against mixing second language acquirers with native speakers before the second language acquirers reach higher levels of proficiency: the presence of native speakers insures that a good proportion of the language heard by the intermediate speaker will not be comprehensible.

Subject matter teaching also has the potential of supplying great quantities of CI; it may even reach the pedagogical ideal of filling the entire class hour with CI!

Subject matter teaching may invoke, and perhaps require, some minimum amount of anxiety. This anxiety, however, is not directed at the language it is presented in as long as the messages are comprehensible. Rather, the anxiety will be directed at the subject matter! Subject matter teachers can further keep the language portion relatively anxiety-free and filter down by not demanding extensive production from students, and not demanding full grammatical accuracy in student production. Testing might also use procedures that require less production (short answers instead of long essays).

This may be a good place to point out that by subject matter teaching, I do not mean "English for Special Purposes" or "English for Academic Purposes." ESP and EAP are, to my understanding, standard language teaching classes whose syllabi are based on an analysis of the tasks students will face and the language they will need (see e.g. Robinson 1980). Subject matter teaching appears to me to be fundamentally different, although it is designed to meet the same goals ESP attempts to meet. While ESP requires a detailed analysis of the syntax, vocabulary, and discourse of a subfield, to be developed into a syllabus and presented bit by bit, subject matter teaching focusses only on the topic, the information or skill to be learned, the assumption being that much of the syntax, vocabulary, and discourse style will be *acquired* along with the subject matter, both in the special course designed for the acquirer, and in subsequent courses. (This idea is not entirely foreign to ESP; several ESP courses emphasize "authentic activities." See e.g. Robinson 1980:39; Widdowson 1978).

### *Evidence for Subject Matter Teaching: The Immersion Programs*

Immersion programs have demonstrated what is possible in second language acquisition using subject matter. In immersion programs, initially monolingual majority children are schooled in a minority language (French in Anglophone Canada, Spanish and occasionally other languages in the United States). They are taught their academic subjects totally in the second language. In what is known as "total early immersion," input in the second language begins in kindergarten. Late immersion programs may begin later, after the children have had at least one year of instruction in the second language.

Immersion programs appear to be successful in many ways. The many reports that have been published confirm over and over that immersion students acquire high levels of competence in the second language. While they may not reach native-like levels, they outperform peers who have had standard foreign language classes. They make normal progress in school, doing as well in subject matter mastery as monolinguals, and they do not fall behind peers in first language development (for reviews, see Lambert and Tucker 1972; Swain 1974).

Cohen and Swain (1976) discuss these successes in light of the lack of success of some other types of bilingual programs.[2] Among the differences between immersion and other programs, these characteristics of immersion may help to explain its success. Cohen und Swain point out that in early immersion "all kindergarten children are unilingual in L1. In essence, the successful program starts out as a *segregated* one linguistically" (47). As mentioned earlier, this raises the students' chances of getting CI. Cohen and Swain also point out that the linguistic segregation "eliminates the kind of ridicule that students exert of less proficient performers" (47), teachers have positive expectations, and the program is voluntary. In our terms, this means a lower affective filter. Finally, "in kindergarten, the children are permitted to speak in the L1 until they are ready to speak in the L2" (48). Thus, a silent period is allowed.

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[2] This is not meant to imply that all bilingual education programs are failures. Far from it. Somes types of bilingual programs work very well and result in more acquisition of English than "submersion" programs. See for example Cummins (1980) for a review. See also Krashen (1982) for a discussion of bilingual education in terms of the Fundamental Pedagogical Principle.

The immersion experience shows us what is linguistically possible from subject matter teaching, when social and psychological problems are reduced and input is made understandable.

### *Other Possibilities in Subject Matter Teaching*

There is no reason that subject matter teaching cannot be extended to other subject matter domains, and utilized to at least supplement the second language classroom. One such domain is the university. I will discuss here the North American university, but the principles can be generalized to any higher education situation in which large numbers of second language speakers are enrolled.

Practically every large North American university has an ESL program (some, such as the University of Ottawa, have French as a second language as well). They range in quality, of course, but it is my impression that regardless of quality, international students regard them as an obstacle. ESL is, moreover, perceived of as irrelevant at just those levels that both theory and applied research conclude it is of the least value: at the "intermediate" level. Many international students no longer feel they need ESL when they are able to survive in regular classes, yet well-meaning administrators feel that for the students' own protection their level of English competence should be higher. Quite often, this feeling is justified. Students are often able to survive only in classes where the language demand is quite low, and/or they rely heavily on native language help, in the form of texts or classmates.

The university might consider classes in subject matter for help in this transition problem, classes in which international students are in fact "segregated," to be offered in areas of use and interest to international students and to be made available on a voluntary basis. Such courses would give academic credit and cover regular subject matter. The main difference between such "international courses" and regular offerings would be that in the former the instructor would be sensitive to the needs of international students and be aware of the fact that students had linguistic deficits and might be unfamiliar with local academic practices. The absence of native speakers in the class would help to insure comprehensibility of input, and lower demands on output would be made. Such classes could also provide an anxiety-free (or at least anxiety-low) initial exposure to the local style of education, and fill international students in on cultural information that is presupposed in courses aimed at native speakers.

### *The Role of ESL in Subject Matter Teaching*

The establishment of international classes does not signal the end of ESL, although it might result in some modification, and hopefully improvement, of our ESL offerings.

First, while we can imagine pushing subject matter classes "down" to the lowest linguistic proficiency level possible, we may always have a need for the second language class at the beginning level. It is an empirical question just how much competence is necessary before students begin special subject matter classes, but there will be, in most cases, a need for a general class at the beginning.

Second, as discussed earlier, there are many aspects of language to be consciously learned, both in grammar (for most students, morphology and "easy" rules) and discourse (conscious rules for punctuation and spelling in written discourse, for example).

Also, a large proportion of international students may desire more English than they can get in the classroom situation, in order to facilitate participation in social life. Intermediate level classes that focus on providing the tools for communicative competence and conversational management would be very helpful for students with more integrative orientation and/or who plan to remain in the country for extended periods of time.

In addition, ESL teachers can serve the useful function of assisting and consulting with the subject matter teachers who teach international sections. Figure 1 presents a schema of the possible interaction between an ESL component and an academic component.

| *level* | *ESL Component* | *Academic Component* |
|---|---|---|
| beginning | classroom language teaching, focussing on topics of general interest; introduction to University life | none |
| intermediate | optional course work on<br>1. English grammar (monitor)<br>2. stylistics (learnable)<br>3. conversation (see text) | international sections of subject matter courses (optional) |
| advanced | none | regular sections of subject matter courses |

Figure 1: ESL and Academic Components of International Students' Program at the University Level

### *The Need for Research*

If I were simply to assert that the international course plan was "the answer" to the transition problem in the university, I would be repeating the sins of the past, claiming that we need only consult theory in order to come to the correct form of practice. At least the following questions need to be asked, and answered with empirical data:

1) Do students who take international classes acquire more of the second language?

2) Do they learn as much subject matter as those who elect to take standard courses?

3) Most important, do they have more success in their studies over the long run?

4) Do they feel more comfortable in the academic environment? Clearly, the answer to these questions will be of theoretical as well as practical interest.

The goal of this final section was not to merely promote subject matter teaching, language laboratories, watching TV, or one particular method. It was, rather, to give examples of how the Fundamental Pedagogical Principle can be applied. There are many other possibilities, and the details of the application will differ in each situation. These applications are, however, only hypotheses in themselves. If we try them, and test them, they may give us better programs as well as deeper insight into the second language acquisition process.

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# LANGUAGE AND THE STRUCTURE OF BELIEF IN MEDICAL COMMUNICATION

## Introduction

Medical interviewing and history-taking highlight several complex aspects of applied linguistic research: a semi-controlled situation in which abstract written summaries represent the interpretation of complex prior experiences and information. Cognitive and linguistic processes and mechanisms are embedded in a local context of social interaction in which a changing setting becomes a source of information used for constructing a dialog and the subsequent medical history. The discourse and text-writing activities are informed and constrained by certain legal and medical rituals associated with health care and social interaction in bureaucratic settings. The doctor–patient interview and history–taking, therefore, are like microcosms of larger societal patterns of information control and social stratification.

The doctor and patient, as speakers and listeners, must be able to create and construct coherence with and from each other's speech. Language use becomes central to the identification of fragments of discourse or text that contain uniform references, or the way a referent is expressed in one part of a long dialogue and then suspended, but subsequently resumed (Grimes 1981; Jones 1977).

When a physician sees a patient some general idea of what seems to be bothering the patient may be known. If the case is a referral by another doctor to a specialist, then the latter physician begins to hypothesize immediately about possible alternatives. The hypotheses will include several levels of conceptualization, including content about basic science, basic clinical science, clinical experiences and will interact with the physician's general but not expert knowledge about socio-cultural and psychological issues. The physician's changing knowledge base guides the kinds of questions asked.

A key problem of linguistic analysis is the way researchers identify and interpret referents, content, and coherence in a text. In this paper I cannot compare and assess the significance of different approaches to the study of texts. Instead I want to examine a substantive problem of seemingly parallel but conflicting beliefs held by a patient. The discussion of these beliefs will also permit us to address some theoretical and methodological issues associated with the way we make inferences about referential uniformity, conformity, content, and coherence in different parts of the same discourse or text.

The medical interview is of value to the applied linguist because it highlights conditions that exist in the study of discourse but which are not always addressed. For example, the patient cannot always remember details or the sequence of events. The patient may mislead the interviewer by descriptions given. The physician may interrupt the patient frequently, trying to pursue a given topic while being told extraneous and seemingly irrelevant information, all the while seeking to remember if each answer is adequate and if a sequence of events is clear. The physician and linguist face similar problems; How to make visible those aspects of discourse and textual materials that seem to be intended, implied, or misleading. The doctor must also maintain aspects of politeness, interest, and expertise.

Memory and language limitations of the patient and the doctor are unavoidable aspects of the study of discourse. The knowledge base or beliefs of the patient can be a significant limitation for answering the physician's questions, just as the doctor's limited knowledge of socio-cultural and psychological issues can lead to a failure to recognize non-medical problems that affect the illness. These problems are sometimes ignored when we selectively choose or create discourse materials that are derived from fleeting conversations or from materials whose socio-cultural significance is minimized or ignored.

The medical history enables us to examine a text that is traceable to prior social interaction. Hence the medical history affords us a rare glimpse at some of the reasoning processes and aspects of the knowledge base of those who contributed to the content and form of a text, and the way that beliefs are linked to language use, emotions and feelings, and reasoning in complex socio-cultural environments. The contrast we seek to examine in the paper is that between a notion of hypothesis-testing we would attribute to the doctor and patient, with the notion of beliefs as reverberating or semi-closed systems in which reasoning, feelings, emotions and value-laden goals and ideas can be resistant to change.

We can simplify the contrast by reference to two idealized notions. The first refers to a comprehension process that is analogous to hypothesis testing, evaluation of goodness of fit, and parameter estimation, where the subject must learn to integrate different sources of knowledge into hierachically organized schemata in order to be successful at problem-solving tasks

(Rumelhart, ms). This view of comprehension is a form of literacy we learn in school but it begins with the socialization process. The ideal of beliefs that can resist change begins with a pre-school literacy socialization period that is not displaced by but interacts with the literacy learned in school. The ideal of a legal-rational bureaucracy is said to epitomize the exercise of efficient problem-solving, while the ideal of a close-knit community dominated by common sense reasoning or concrete thinking and beliefs that resist modification is often associated with a notion of tradition-oriented forms of social organization.

The medical interview and history reflect aspects of these two forms of literacy: The physician recodes the often ambiguous, rambling interview language into abstract categories that facilitate and depict efficient problem-solving; patients use a particular or restricted semantic domain to represent the beliefs they employ and create about their illness. These beliefs often run counter to the doctor's views.

## Comparing the doctor's progress notes with the interview

In this section a particular case of a patient referred to a gynecological clinic of a teaching hospital will be used to illustrate the recoding processes used by the physician in his attempt to understand the patient's illness.

The doctor's progress notes (or brief history) are contained in Figure 1. The information on the patient's age, weight and blood pressure are not part of the interview, but were taken by the nurse before the patient was seen by

1 Wt: 146 B/P 112/64 3/21/77: Age 62
2 Widowed 9 mos. – depressed. Saw internist 4 mos. ago because of vulva
3 irritation – started 1.25 mg. *premarin* → breast soreness, so stopped EST.
4 On estrogen for 7–8 yrs. up to 4 yrs. ago. 1.25 mg. then 0.625 mg. at Phipps'
5 Clinic – Mammogram – fibrosis (1971) – reduced dose of *premarin*.
6 General: (1) Large cyst L kidney known for many years.
7 Has had 2 kidney stones – age 21 & age 59 – passed spontaneously.
8 Has "kidney infections" of 2–3 years.
9 (2) Acute glaucoma – surgery 12/75 at UCLA (R eye) – needs for both eyes.
10 2 children (ages 27-son, 23-daugther) in San Diego.
11 Surgery: Skull fx age 10, Appendectomy age 17, T & A age 8–9
12 PH: Diphteria age 5
13 Systems Review: *D* arrhythmia recently – Takes Inderal p & n almost every
14 night.

FIGURE 1: Doctor's written progress notes

Progress notes

(2) Widowed 9 mos. – depressed. Saw internist 4 mos. ago because of vulva
(3) irritation – started 1.25 mg. *premarin* → breast soreness, so stopped EST.

Medical interview

1 Dr: What can I do for you?
2 Pa: Well, uh, I was concerned about, uh ... last summer, I guess, I-I was
3 having a problem in the uh ... uh, I guess w-what you call the bulk of the
4 outer uh part of the organ. There's like, paper thin uh cuts, just a little
5 bleeding. And finally when I went to have my checkup, which was uh ...
6 about 3 months ago, my Internist asked me if I'd had a paps, test and I
7 hadn't so he took one and he said uh my uterus was kind of spongy, and
8 also I had uh, very low, I was very low in hormones, and he – uh – the
9 estrogen (Dr: mh) the count was so low he said I didn't get it so he put me
10 on uh ... oh, uh on the estrogen pills. Now, about four years ago when I
11 went through Phipps, uh, they had cut me down to a half and I still was
12 getting alot of uh swel-swelling and soreness in my breasts and they took a
13 mameograph that time and they told me to get one about every six months,
14 but, I sort of took myself off the estrogen and found that I didn't have any
15 of that feeling, so I've been off of it, and uh that's what – I didn't realize
16 when first my husband died nine months ago, but still, anybody'd just look
17 at me and you know I'd just be ... be uh the bereavement. I don't know. I
18 uh never used to be like that ...

FIGURE 2: Doctor's progress notes and interview transcript

Each dot = 1 second pause.

the physician. The doctor's notes (lines 2–4, Figure 1) reveal that the patient has been a widow for nine months and is depressed. She had seen an internist four months earlier because of vulva irritation and was started on 1.25 mg. of premarin (EST or estrogen) which she stopped because of breast soreness.

I try to guess the doctor's inferences about the patient's remarks by comparing the progress notes with the original interview material. The opening line of Figure 2 is a question by the doctor or a *request* for information that can be used to help the patient. We assume the patient is being invited to supply information that will clarify the kind of help the doctor can provide. Knowing that a physician is asking the question enables us to view the doctor's opening remark as a routine way of eliciting information from the patient.

The physician's progress notes (which were hand written at the time of the interview) in Figure 2 (line 2) refer to the patient as "widowed 9 months = depressed." Lines 15–18 provide us with information about the husband's death nine months earlier and also gives us some indirect information that could be linked to the physician's inference that the patient was depressed. The patient's remarks ("... I didn't realize when first my husband died nine months ago, but still, anybody's just look at me and you know I'd be ... be uh the bereavement. I don't know. I uh never used to be like that ...") implies that she has felt like a different person since her husband's death. Her manner of talking could be seen as emotional and confusing.

The progress notes reflect several key topics and state the patient saw an internist four month earlier because of vulva irritation. The patient mentions seeing her internist "about 3 months ago" instead of the doctor's recording of "4 mos." The physician's reference to "vulva irritation" summarizes the patient's problem of "... the bulk of the outer uh part of the organ. There's like, paper thin uh cuts, just a little bleeding." The problem is elaborated by the patient in lines 5–10 (Figure 2) when there is a reference to "finally when I went to have my checkup" as if to say that the checkup was to confirm the problem. The confirmation of a problem is suggested by noting that the internist had asked if she had a pap smear test. The results of the test are not reported but there is a reference to patient's uterus being "kind of spongy" and her being "low in hormones."

The doctor's progress notes (lines 3–4) states that 1.25 mg. of premarin was started four months earlier by an intenist, but we do not know if this may have been due to (Figure 2, lines 8–12) the patient's uterus being "kind of spongy" or her being "low in hormones" or the vulva irritation. The doctor's notes (Figure 1, lines 2–4) seem to imply that 1.25 mg. of premarin was started four months earlier and then stopped because of breast soreness. The patient (Figure 2, lines 10–14) refers to a visit to Phipps (clinic) four years earlier where she states that an unknown dosage of estrogen was reduced to one-half. She also reports taking herself off of the estrogen because of "... swel-swelling and soreness in my breasts ..." There was no reference to swelling and soreness when visiting the internist three (four) months prior to the present interview. Perhaps the doctor was confused by the patient's rambling style and combined information from the visit to the internist with the visit to Phipps Clinic four years earlier. The physician clarifies this problem in subsequent interviews. The doctor's subsequent notes and the patient's remarks indicate she was on estrogen during the visit to the clinic four years earlier.

Another physician reading the progress notes could infer that the internist had prescribed 1.25 mg. of premarin four months (instead of four years) prior to the present visit and that the patient had terminated the treatment

(5) On estrogen for 7–8 yrs. up to 4 yrs. ago, 1.25 mg. then 0.625 mg. at Phipps'
(6) Clinic – Mammogram – fibrosis (1971) – reduced dose of *premarin*.

Medical interview

1 Dr: Now, four yrs. ago when you were taking the hormones, uh . . . you were
2 going to Phipps' Clinic, how long did you take the hormones before – I
3 mean, had you taken them for a number of years?
4 Pa: └I had
5 been taking them. Yes, probably about . . . 8, 7–8 years . . .
6 Dr: And that was the purple one?
7 Pa: That was the yellow one to start with, and then the purple one when they
8 cut me down.
9 Dr: Do you know whi-which hormone you were taking?
10 Pa: └So I (?) the yellow one, the orange, yellow one.
11 Dr: Have you ever taken a different dose from that?
12 Pa: Well, uh, at Phipps' they had uh, subscribed half that dose, the little brown
13 one I believe . . uh, but as I say, I don't . . .
14 Dr: └But that
15 still caused breast problems, too, hmm?
16 Pa: └Hmm-hm. I mean, I just stopped taking
17 them and I hadn't been back for a test or anything, but my breasts are back
18 to normal and I q-quit taking those things . . .

FIGURE 3: Doctor's progress notes and interview transcript (continued)

because of swelling and sore breasts. The patient did not say how much estrogen she took after her visit to the internist nor if she experienced any swelling and soreness in her breasts. The patient's narrative up to this point only describes two different time periods. Line 2–4 (Figure 1) of the progress notes do not make this clear.

The material in Figure 3 might be viewed as contradicting my remarks in the previous paragraphs because the progress notes do record the visit to Phipps Clinic four years earlier. As the interview continues the patient's narrative reports three time periods; eleven to twelve years ago, four years ago, and four months prior to the present interview. The physician's progress notes (lines 3–4, Figure 1) state that the patient began taking estrogen ". . . for 7–8 yrs. up to 4 yrs. ago . . ." The notes imply that the dosage was initially at 1.25 g. and then reduced to 0.625 mg. or half the dosage. The doctor picks up on the visit to Phipps Clinic four years ago (lines 1–3, Figure 3) to ask about the length of time the patient had been taking hormones. This question does not elicit information that contradicts what was said previously in the above paragraphs.

The patient's responses (lines 7, 8, 10, 12, and 13, Figure 3) to the physician's questions (lines 6, 9, and 11, Figure 3) refer to the color of the pills as a means of identifying the dosage. Yellow seems to be associated with 1.25 mg. of premarin, while purple or brown seems to represent half of this dosage. The same conclusion is reached and noted in Figure 2; the patient took herself off the estrogen four years earlier because of their negative affect on her breasts.

The physician's reconstruction of the patient's remarks are also evident in the way the mammogram is noted on line 6 of Figure 3 although this point was stated by the patient earlier in line 13 of Figure 2. The notation of "fibrosis (1971)" (line 6, Figure 1) seems to be an inference that an examination of the breasts indicated a fibrous condition and hence the reason for the mammogram. But the date is confusing because the patient stated the mammogram was taken four years earlier at Phipps Clinic, making it 1973, not 1971.

The physician notes the reduced dosage of premarin in lines 5–6 (Figure 3) of the progress notes but the patient had already given this information earlier (lines 11–15, Figure 2).

The physician makes many inferences about medical conditions based on particular lexical items and phrases in the patient's indirect remarks. For example, there is a reference to the patient being depressed, establishing the dosage of the premarin by trying to clarify the color of the estrogen pill taken, and perhaps we can assume that a mammogram had been ordered because of the fibrous condition of the patient's breasts. But the patient's rambling and sometimes emotionally confused style of speaking also leads to errors of fact; the physician fails to establish the facts by not clarifying ambiguous statements by the patient as when dates are not recorded as stated by the patient or events are transposed because of contradictory dates.

When the physician pursues what he or she feels are good guesses about what has occurred or is happening to the patient, many symptoms are ignored, some are misunderstood, and others become reinterpreted to fit the physician's prior and emergent knowledge base or schemata. Some of the ignored or misunderstood or reinterpreted information may (as in the present case) be reexamined during subsequent visits and by a physicial examination and laboratory tests. But the physician's perspective may be at variance with what the patient thinks is happening. Reports of patient dissatisfaction with the way physicians elicit information and ignore the patient's perspective are common in daily life discussions by lay persons and are also openly discussed in medical school classes.

## Beliefs about illness as depicted in the patient's narrative accounts

The patient's beliefs about her illness were expressed to the doctor and they were still viable sixteen months after her initial visit. Despite the fact that the patient was told that laboratory tests confirmed that she required an operation to remove a cancerous uterus, she was convinced that her illness was linked to visits to her husband while he was dying of cancer of the pancreas some two years earlier. This belief can also be linked to information from the mass media, the way the physician discussed her illness with her, and a rather impersonal bureaucratic procedure used by the hospital to inform patients about the results of a pap smear test. My discussion is based on rather lengthy tape-recorded information. To save time and space I will paraphrase the extensive narrative materials but provide occasional brief quotations from the transcript.

The interview with the patient provided the opportunity for a reconstruction of a set of beliefs about her illness. We do not know if the beliefs existed at the time of her original interview with the physician. The patient was not encouraged to speak about her beliefs about her illness during the initial visit to the doctor up to the time of her surgery, but she had complained about the explanations given to her despite the fact that the physician discussed with her many things about her illness that she was to claim were never told to her. It appears that the physician did not wish to become involved in the patient's beliefs but did make several attempts to assure her about her pending operation and did explain the nature of her illness. His continued progress notes also reveal that the patient was concerned about the operation and expressed a desire to have the same gynecologist remain her physician and perform the surgery.

The belief that she did not have cancer and that the operation may have been performed on the wrong person seems to have existed in parallel (or perhaps in partial interaction) with the belief that she and her children had contacted cancer from a "contagious" husband who had died of cancer nine months before her first visit to the gynecologist.

The interview I conducted sixteen months after the patient's first visit to the gynecologist began with a surprise. She confronted me with a report from the hospital laboratory that had arrived when the patient was in the hospital recovering from surgery. There was no date on the letter and only a stamped signature of the gynecologist. The envelope was dated May 3, 1977. The patient's remarks in Figure 4 indicate that she assumed that perhaps a mistake had been made. Her remarks (lines 1–3, Figure 4) are not clear (first she stated that someone's letter had gotten into her envelope) but

1 P. I had two thoughts, was this somebody else's letter stuck in my envelope,
2 or uh . . . or was that normal and somebody in, along the line somewhere
3 said it wasn't normal, and I, as I say, then I, I just didn't know what to
4 think. When you get, open up a letter like that . . . . see . . . it's a shock
5 particularly I think I hadn't gotten over the shock of my husband's death
6 yet and all this kep, came upon me.
7 I: Okay . . . okay, and you did speak to the doctor . . . .
8 P: Apparently he said something to them, so I'm getting a date on it now but
9 still as you see I don't have a name on it.
10 I: Yeah.
11 P: What's so hard about typing in a name? I think this is an important
12 procedure that we do these Pap tests and I think (I:yes) they should be (I: I
13 agree) covered well instead of just haphazardly.

FIGURE 4: Patient's confusion over post-operative receipt of normal Pap test results.

Each dot = 1 second pause.

we could infer that the patient was also thinking that perhaps her pap test was normal "... and somebody in, along the line somewhere said it wasn't normal ..." The patient seems to have assumed that there had been a bureaucratic mistake and this led her to question the original diagnosis and the subsequent operation.

The letter with the report of a "normal" pap smear test was labeled as a "shock" by the patient and reminded her of the "... shock of my husband's death ..." When the patient states (line 6, Figure 4) "... and all this kep, came upon me," we can infer that the letter with the test results triggered off (prior?) doubts about her illness, the justification for the surgery, and renewed thoughts about her husband's death. The interview continues with an exchange over the way the patient came to choose her physician and remarks about why she wanted private hospitalization instead of going to a military hospital.

The patient then began talking (lines 14–19, Figure 5) about the pap smear test done during her first visit to the gynecologist, and then being told over the telephone that she had cancer. The implication here is that the discovery of her cancer seemed not to be important because she was reminded of her dead husband.

The patient's remarks are difficult to interpret. On lines 20–22 of Figure 5 she states that "But, he [the gynecologist] mentioned prior to this, that if there was anything, and I don't know why, we were talking about if there was anything. This, what, as Dr. B brought up." The "prior to this" could

14 P: ... But, uh, Dr. B. Gave me the examination, and took this Pap test and
15 then i don't remember, it wasn't very long after he called me and he, on the
16 phone, and he said that ... uhm ... uhm, we found cancer cells. Or cancer,
17 cancer cells, I don't remember just how he said it, and of course I was, as I
18 say, still in shock from my husband's death. It didn't phase me that I had
19 cancer at the time. It didn't, I, it didn't register. I just asked him what
20 comes next. But, he mentioned prior to this, that if there was anything, and
21 I don't know why, we were talking about if there was anything. This, what,
22 as Dr. B. brought up. I stopped to think why was that brought up; I can't
23 remember, but, uh, that he would then take a D and C. But when, when he
24 called me, he said there would be no need for a D and C, that there was
25 definitely cancer .... and so he would take a biopsy ... and he took a
26 biopsy ... and told me that there was, I guess, and uh, as I say, I got the
27 two kind of mixed up because, uh, he called me and asked me to come in
28 for a biopsy and (not?) do a D and C, and then he said there was no need to
29 do a D and C. That there was, that it was definite. So I went to see my
30 intern, internist, and he said well .... uh ... what did he say? He said
31 something about, he said he must have really hit a particular spot where it
32 started because, I guess, according to him, and he had taken a Pap test
33 prior to that about four or five months before that. An then, uh, I think it
34 was uh, probably a Class 2 or something and I had a little infection that he
35 was treating but, uh ... I was uh ... sort of going fairly early just to double
36 check and talking to this widow, she thought so much of Dr. B. that she,
37 she said go see him/you'll feel better if you do. But, uhm, then reading that
38 letter I thought well, something got mixed up there. Maybe somebody is
39 walking around with cancer and I didn't have it. I, all this was going
40 through my mind, you know ...
41 I: All right, but that was going through your mind after you came out of the
42 hospital in terms of the letter .. is that right?
43 P: Well, uh ... my friend said, why don't you double check with another
44 doctor.
45 I: Oh, I see.
46 P: And I said, I'm just so mixed up now. I'm, I, I said .... if I need surgery, I
47 would want Dr. B. to do that (?), I've heard he's such a good surgeon. So,
48 even my internist said that he's probably done 2,000 of them so don't
49 worry about your surgery. You'll be all right (laughs). So, I got that ....
50 part, but, I, I, no, I kind'a went into it not sure that I had cancer.

FIGURE 5: Patient's reconstruction of confusion vis-à-vis post-operative pap test results and physician contacts prior to the operation.

have been an attempt to reference the physician's concluding remarks of the first interview in which he told the patient "... well ... from uh ...uh standpoint of uh, a gynecologist, I think everything is, is really pretty good." But there is no mention in the first interview of the "D and C" (dilation and curettage of the uterine cervix) that the patient mentions in line 23 of Figure 5. The patient may have thought that the D and C and the letter from the hospital meant that she had a fairly benign condition. Between 21 March 1977, the date of the first visit, and 25 March 1977, the date of the second visit, the physician had called the patient and told her that her pap smear was abnormal and that she was to come to the clinic for biopsies. The physician also implied that if the biopsies were negative she might also come in the following week for a D and C.

The patient (lines 23–29, Figure 5) confuses two telephone calls from the physician and several visits with the physician. During the 25 March 1977 visit with the physician the patient was reminded of the doctor's telephone call and the D and C possibility. At the same visit the physician performed the biopsies. On 28 March 1977 the physician entered a note in the patient's chart and confirmed (due to biopsy results) an adenocarcinoma suggested earlier by the pap smear. He called the patient and explained that the D and C would not be necessary and she should come in for a visit as soon as possible. The patient returned on 30 March 1977 and was again told about the results of the biopsies and that a D and C was not necessary. The physician repeated many of the questions asked during the first interview including a review of previous estrogen taken and the sequence of steps that resulted in her coming to the gynecologist.

The patient did not remember the sequence of events clearly. She confused the first interview and the first telephone conversation with a second and third interview and a second telephone conversation. The information she received from the first interview suggested that there was nothing serious involved. The abnormal pap smear results based on the first interview led to a call by the physician telling the patient that a D and C might still be in order while also stating that biopsies should be performed. The patient continued to maintain her belief that her condition was not serious even after a second visit to the physician on 25 March 1977 when the biopsies were performed. The doctor's second telephone call on 28 March 1977 and interview with the patient on 30 March 1977 failed to convince her that the diagnosis of cancer was the result of appropriate medical practice. The patient was still confused in July 1978 when I interviewed her at home (lines 14–29, Figure 5).

The remarks in Figure 5 suggest a series of confusions that began with the initial interview and physicial examination. The gist of the confusion is an apparent discrepancy between the physician's remarks of the seemingly routine nature of her condition, and the progressively serious consequences that led to the operation for the removal of her uterus. The confusion is evident in the remainder of Figure 5 when she retells how she went to see her internist (lines 29–33) to tell him the results of the biopsies. The implication is that she may have returned to the internist because she doubted the validity of the gynecologist's tests since the internist had told her previously that an earlier pap smear was "probably a class 2 or something and I had a little infection that he was treating but ..." (lines 33–35). The patient had made her original appointment to see the gynecologist because she wanted a specialist to give her a second opinion ("just to double check") what the internist had told her. The internist presumably felt that the biopsy done by the gynecologist was taken at precisely the right place (perhaps because of luck as we read the patient's accounting of things), as if telling the patient how to interpret the gynecologist's diagnosis.

In lines 35–40 of Figure 5 the patient briefly indicates how she was looking for a second opinion to the internist's treatment of her infection, and then returns to the letter she received about the normal pap smear test after returning from the hospital. Her remarks (see also lines 49–50, Figure 5) again imply that perhaps there had been a mistake, that she did not have cancer and that someone else does have cancer who does not know it. There is an implication that the biopsies were also incorrect.

The details of this case are lengthy and I only want to sustain the present discussion long enough to give some closure to the nature of the patient's beliefs about her illness.

When I asked the patient what she tells people who ask about her illness, she was able to articulate an answer indicating that she had cancer in the lining of her uterus. She added the remark that she tells this to people with some doubt "because there's that 'if' in my mind."

The patient's suspicion about her own cancer must be contrasted with her views of cancer in general and her belief that "... maybe, the cancer is contagious and nobody warned us, and my, me dear son, he always kissed his dad on the forehead and, un my uh daughter did too, and you know that last three weeks or so, they really perspire and I wonder if the germs don't come out with the perspiration ..." The fear is that perhaps the entire family had contacted cancer from the husband because of the possibility that pancreatic cancer could be contagious. There is another reference to the possibility that leukemia could also be contagious.

The patient suggested that her son's current urological illness may be linked to her husband's cancer. The patient also stated the daughter had a problem, and noted elsewhere in the interview that the daughter had "a lump" on her neck. The patient's belief about cancer being contagious, therefore, combines several family conditions that lend coherence to her account.

It is difficult to pinpoint the origin of the patient's beliefs about cancer. The reconstructions that are elicited in the interview with the patient sixteen months after her initial interview with the gynecologist are based on the assumption that her internist did not seem concerned with the results of the pap smear test he ordered, treating her problem as a local infection. From the patient's point of view a diagnosis of cancer of the endometrium, despite biopsies, was perhaps difficult to understand because she thought the gynecologist, after the initial interview, had mentioned that things appeared normal. The patient seemed to confuse the two telephone calls made by the physician: in the first call the D and C was mentioned as an option; in the second call the D and C was ruled out because the biopsies confirmed the presence of cancer.

The bureaucratic practice followed by the hospital at the time of the patient's visits, sending test results without the patient's name on the letter itself, was seen by the patient as support for her belief that perhaps she did not have cancer (having received a normal report) and that the wrong person had received the operation. The patient also felt that the nature of her illness had not been explained adequately. But this was contrary to the facts.

The hospital records and our tape-recorded sessions of several physician patient interviews indicated that the doctor had explained why the D and C would not be necessary. The physician also explained the nature of the patient's illness. The doctor, also discussed the patient's illness with her family. He was well aware of the discrepancy between the patient's views of her illness and his own views. She felt he had not pursued the matter. What is unclear is why the patient sought a second opinion from the gynecologist, but then seemed not to accept it emotionally despite following his instructions for the operation. Instead she seems to have linked what she thought was a benign diagnosis by the internist to her claim that the gynecologist mentioned the option of a D and C. We could speculate that the patient had acquired the belief about cancer being contagious during her husband's illness and that this motivated her to seek a second opinion despite the internist's benign diagnosis. The belief system of the patient seems to contain two independent and parallel foci; on the one hand there is the belief that cancer is contagious and that she and her children probably contacted the disease from her husband. On the other hand she seems to have linked the internist's diagnosis to the claim about an option of a D and C by the gynecologist who she said felt she was in good condition when he examined her during the first office visit, and the receipt of a normal pap smear report from hospital upon returning home from surgery. These latter conditions and her contention that the gynecologist failed to explain her illness and the operation, led her to the conclusion that she did not have cancer and that perhaps the wrong person had received the operation and treatment.

## Conclusion

Belief systems can be described as sets of schemata or modules of knowledge that do not always interact with one another to form clearly integrated and hierarchically structured higher level abstractions or predications. People use these mental models to understand their everyday experiences and the complicated factual information that must be processed when formal modes of communication and content are encountered.

The patient's beliefs about cancer and her illness in the case discussed above display particular forms of speech and reflexive or self-conscious thoughts about her experiences and perceived factual information. But these beliefs do not appear to be integrated vis-à-vis contradictions that we can perceive as researchers, and the beliefs do not appear to be driven by an executive control system that continually integrates incoming information across existing schemata to form hierarchies of clearly defined domains of knowledge. Instead the integration of information and the resolution of conflicting data seem to occur within parallel belief structures or schemata despite several attempts by the physician to correct apparent misconceptions about the significance of a pap smear test, a D and C, and the findings of biopsies. The physician, however, did not seek to explore from the outset of the initial interview the patient's beliefs about her illness and the nature of cancer and her preoccupation with her husband's recent death from cancer.

We have a contrast between the patient's beliefs about illness and its causes, and the formal discussions presented by the physician. The cultural conceptions making up the patient's belief systems interact with and incorporate the factual knowledge presented by the physician.

The contrast between the patient's and the physician's knowledge can be clarified by extending D'Andrade's (1980) notions of abstraction by recoding and content based abstraction. The notion of abstraction by recoding can involve a market transaction recoded into a formal symbol system like algebra. But we can also refer to situations in which a person's legal, medical, tax, or insurance problem is recoded into a professional or bureaucratic symbol system.

The patient is exposed to mental models based on abstraction processes that emphasize a repetoire of patterns or configurations that can be applied to a wide number of situations. D'Andrade (1980) notes that these patterns are coded within the particular semantic domain at hand. We have content-based abstraction. But the physician is accustomed to recoding the patient's speech acts into a different symbol system that employs formal language abstraction and an external memory like dictionaries for medical terms, textbooks, laboratory reports, and x-rays. These two forms of literacy are often found in their more idealized forms in casual discourse and in computer programs that try to simulate real world human processes and objects. In everyday life circumstances the two forms of literacy interact and one is favored over the other according to their implementation by persons assuming particular social roles in various organizational or institutional settings.

The patient finds it difficult to follow the physician's language and often tacit or even explicitly specified symbolic recoding. The patient's literacy or rationality, even if he or she is highly educated, is no match for the physician's language and external memory system, a system that is in constant tuning if the doctor is able to keep up with new developments in medicine.

Whenever we must confront formal bureaucratic procedures we must face persons who have become expert in recoding information into different symbol systems. Our dealings with physicians, lawyers, dentists, accountants, or other professionals or technicians, often means interacting with someone under circumstances where there is an inequality of power. We must often rely on forms of reasoning and emotion that interact or blend into each other, and that seem to be orthogonal to the recoding operations that formal bureaucratic faces and procedures force us to confront.

In this paper I have briefly illustrated the bureaucratic recoding operations of the physician by reference to the way the progress notes summarize the actual medical interview. This recoding seldom makes visible the patient's perspective. The post-operative interview with the patient months later illustrates her views and beliefs about the illness. A brief analysis of the research materials suggests that the notion of two forms of literacy can help us clarify the way cognition and language use are central to our understanding of the social structure of health care delivery.

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# COMPUTER AIDS IN TRANSLATION

The presentation is based on the results of an international meeting for establishing the state of the art and for making recommendations for continued research and development in the field. The meeting was arranged by Kval on behalf of the AILA Commission for Computational Linguistics in conjunction with the Committee for Linguistics in Documentation within the International Federation for Documentation (FID/LD). See statement on pp 99–101. The conclusions below, though in tune with that statement, have been formulated by the author, who therefore alone carries the responsibility for them.

## 0. Theory and applications

The title of this presentation was chosen with care. Nonetheless many of those who read it casually will most certainly mistake it for one of the following two topics:

Machine translation

Computer-aided translation

These are well-known topics which, each in its way, evokes a set of standard expectations and prejudiced protests. Though we are concerned with both, our perspective is another one, and the difference is essential. It has to do with the roles of applications and research in applied linguistics, roles too often not properly distinguished even within AILA. We would therefore want to emphasize what Bertil Malmberg in his opening speech (p. 7) said about the interaction between theory and application. Solid theory is likely to have practical applications and serious practical investigations are likely to have theoretical implications. But an amorphous mixture of the two is likely to be both impractical and theoretically uninteresting if not confusing.

In the field of translation, now, we may do one of three things:

*a* We can take the need to produce translations as a starting point and investigate what tools we can supply – now or later – from linguistic research and, inversely, what implications the failures to solve the practical problems have on our theory.

*b* We can depart from existing tools – models, procedures, experimental computer programs – and see what useful tasks outside the laboratories they might be exploited for.

*c* We can use translation as a pretext for theoretical experiments.

All three approaches are respectable scientific activities; the first two belong to applied science. What is unscientific is the mixed approach: to take a given procedure and try to adopt it to a given task. When starting-point as well as target for the race are predetermined, we have left research and turned to development, in which our efforts should be judged according to uncompromising commercial standards and these only.

Our perspective now is the first one of these three. We therefore want to survey how computers can aid translation in one way or another. We are careful, then, not to anticipate in our very question whether a fully automatic procedure is the target or a procedure where the machine has a subordinate position as an assistant to a human who still deserves the title of translator. Those choices should be the outcome, not the presuppositions, of our examination.

We could have chosen another approach. One could, e.g., meet the challenge to produce a translation untouched by human hand. Since translating seems basically so simple and repetitive – particularly to people who are not themselves competent to perform it – it is an intriguing question why it has withstood a quarter of a century of attempts, not always underfinanced, at mechanization. It is a seemingly well-defined intellectual task and a proper field for testing artificial intelligence hypotheses on a language material. The fact that machine translation fails – as we shall soon see that it does, except under very special conditions – is then no reason to discontinue research. On the contrary, it is very rewarding to try to understand why and how, just as physicists talk with fervour about their perpetuum mobile machines – not in spite of, but because of, the fact that these fail. Thus, if translation did not exist – if nobody ever wanted a translation printed out for its own sake – it would have to be invented for the benefit of machine translation. Sillier experiments have been made! Whatever can be said about pure machine translation as a means to produce translations, I am willing to defend it as a branch of pure theory.

Let us now proceed to summarize the needs and then investigate how these are matched by the computational support offered today. After that, we can discuss what further support could be given today or promised by us as linguists for the future. Those promises will then be the basis for a research programme. Finally, we shall reverse the perspective and glance at the possible implications for the development of linguistic theory.

## 1. Needs of Translation Aids

### a. Cost

The cost of qualified professional translation is enormous and the amounts to be translated large, even if we disregard, as we want to do in this connection, all literary translation and all personal communication. The costs are higher and the volumes are larger than laymen – most professional linguists included – would surmise. If only a small portion of these costs could be saved, the gain would be many times greater than the resources spent on linguistics today.

The prices vary, of course, from place to place, but the magnitude compared to the general cost level in a country are the same. In Sweden, the free-lance translator's default fee, applicable when special arrangements have not been made, is equivalent to about 50 US dollars per page; the total cost if subsequent verification and revision is included may often be much higher. In-house translations, whenever the real cost can at all be estimated, normally cost much more. Another measure of the resources necessary for translation today is the time spent over a page. Typically, an average output of 4–8 pages per manday is mentioned as a target; that is probably over-optimistic.

The volumes are large and increasing. The central administration of the European Common Market alone handles more than half a million of pages, many of which are translated into several languages.

On the other hand, low quality translations are cheaper and in smaller demand than laymen expect. The price amplitudes dependent on quality may represent a factor of five. Amateurish, unspecialized translators find it hard to get assignments and make a poor living from their work even when they are busy.

### b. Capacity

If we look towards the future, there is a capacity problem as well as a cost problem. There will simply not be translators available for manual translation on the scale required by the internationalization which is now expected or desired. In cost terms: the price may increase towards infinity when we want to increase the volume beyond some not very remote limit. We can compare with the situation for telephone operators. For a city like Stockholm, it has been calculated, today's telephone traffic load, if handled by manual switchboard operators, would require more operators than the total population of the city. Similarly, some of the political dreams today would imply that in the next generation everybody spent his days translating other persons' speeches – unless technology rationalizes this task.

It should be noted, however, that while there is a shortage of qualified translators, there is an over-supply at present of unskilled translators. Every translation agency has the unpleasant task of dismissing willing, well educated and nice but unprofessional people who claim to be bilingual and/or have passed examinations from interpreter and translation schools.

**c. Speed**

Another reason for mechanization is the need for greater speed. No manner of organizing manual translation can reduce the delivery time to the levels required for, say, on-line communication with multi-lingual databases available over a computer network.

**d. Quality**

Translation, it might seem, is a dull task to mechanize since it is one which – unlike, e.g., large scale document retrieval – succeeds today, although one might want it cheaper, faster and in larger volumes. The computer could, in this trade, at best achieve what trained people already do well. However, the view of today's standard as an optimum is not shared by people with some practical experience in the field. The translations produced today – often under time pressure, late at night to be ready for a meeting the next morning, where the translator's guesses are rapidly transformed into binding precedence cases – abound in minor or greater inadequacies in style, terminology, grammar and spelling. And even the best translations do contain errors, some of which may lead to misunderstandings but all of which delay the reader. And as the staff has to be rapidly expanded, with little time for training, the quality problem becomes crucial. While human translation is often held against machine translation as an unattainable target, it is not true that human performance is good enough for all purposes. Beside the need for translating large volumes cheaper and faster, we also need aids to make better texts – possibly at higher costs – than we are capable of producing today.

## 2. Computational Aids Offered Today

What, then, has been offered?

## 2.1 Automatic Translation

All over the world, the first attempts at computerization of translation work have aimed at a procedure where the nucleus is a phase of completely automatic translation, possibly preceded and/or followed by manual pre-editing and post-editing, respectively. Let us call this pure approach automatic translation.

### a. Experiment or production?

Now, how far have these attempts advanced by now? Looking round internationally, as we did at the international seminar arranged by our AILA Commission, we must notice that today's technology applies successfully only where there are large amounts of extremely homogeneous text material so that the system can be tuned to suit the input. And homogeneity means not only a reduced vocabulary and 'simple' grammar – whatever that is. Complex sentence structure and a large dictionary are no real problems: computers are good at handling complicated rules, if strict, and in remembering long lists, if used in a predetermined way. But homogeneity must extend also to semantics – new perspectives, new interpretations, new secondary meanings lead the program astray, even in simple cases, in a manner which would baffle even the most desillusioned school teacher.

### b. Stereotype texts

An example of an application which is actually running is the Canadian Taum project for translating weather bulletins. Here, the text is truly repetitive and the semantic field restricted. Also, the amounts of text – to be translated night and day – are considerable. But the bulletins are texts, not formulae or merely sets of standard phrases. They are, in other words, very uniform without being completely standardized into a code language.

The computerized translation system adapted – in fact designed – for this particular task does quite well. However, though it is an automatic translator in the sense that it performs on its own without interaction with a human, it shares the job with a human stand-by translator in that it turns over to him the sentences it finds hard to handle. It has been reported that the system's self-criticism is very adequate: in the sentences it undertakes to translate, very few errors are committed; the rest of the sentences the machine does not even try to touch. Its judgement in that respect, then, is better than that of many ambitious humans.

The number of sentences rejected as being beyond the system's capacity is not negligible. It is about one in every seven. Interestingly, this average varies significantly with the weather. When the weather is what it is supposed to be in Canada, the automatized portion is greater, but when there are thunderstorms or other unexpected phenomena, with warnings to the public, the computer must ask for assistance more often. This little statistical observation may perhaps help us remember how intimately translation is connected to other aspects of the texts than mere word combinatorics.

So even on this very specialized material, mechanical translation is not a trivial task. That is the present borderline between success and failure – or between actual and only pretended practical performance.

Now, this example is not only one example out of many. It is *the* example which is quoted again and again as the illustration that pure machine translation runs now in practice. Other examples of actual practice have been quoted but the majority of them are alleged applications where it is not possible to verify that the 'use' of the systems is of a production character and not only demonstration or experiment; where such verification has been possible, the claims have, more often than not, been shown to be unfounded.

However, we know of a few other unpublished applications where today's technology performs well on deliberately homogenized text material. Thus, good results seem to have been obtained where a large organization can control the writing of the documents, obliging the technical writers to follow a very specific and detailed standard on all levels, from contents structure and terminology down to grammatical patterns. Such subsets of English, rather than pre-edited texts, seem to lend themselves to mechanical treatment.

These cases are atypical. Almost all texts to be translated – even the most barren economical or political report, seemingly void of innovations in style or content – are by far too varied to suit today's tools.

In short, machine translation without further improvement could be very profitable for very large recurrent text volumes of sufficient homogeneity. The person who finds – or creates – an appropriate domain could clearly make a fortune by setting up an ad hoc translation service. However, the same is true without automation. The large recurrent tasks of essentially the 'same kind' have been the dream of translation agents as long as agencies have existed. These would make it possible to set up an efficient high-throughput shop with very cheap but thankful and trustworthy labour, working along very specific instructions. Once the model translations, style sheets and term lists have been drawn up, the actual formulation of the texts could be entrusted to cheap routine staff. Unfortunately, though many texts appear monotonous enough to a reader or a human translator, most sources vary with time too much for this kind of operation. Therefore, industrial scale translation agencies are non-existant even in the biggest cities. The chances for *creating* suitable material for stream-lined translation seem to be greater than finding them, but a scheme involving controlling the original writer requires large organizational resources. Such schemes are profitable in themselves but, clearly, here machine translation may enhance profitability.

### c. Machine output as raw material

Now, if the machine input is not good enough per se it is argued that manual pre- and postediting can make up for machine shortcomings. However, as was pointed out in the first publications in the mid-fifties – the discussion is distressingly similar now – pre-editing requires, fundamentally at least, as sophisticated an editor as translating; and the machine output is *not* a good raw text for editing. In fact, it is even worse seen as raw material than as final output. The amount of editing – counted in characters replaced or hours spent – is not small even if the text is only slightly off the point. It is not a matter merely of replacing wrong terms. The whole structure is often wrong, not to speak of rhythm and style.

### d. SOT

One might argue that is does not matter so much if the translation is imperfect. The reader can follow the presentation in spite of a lack of style and elegance. Critics representing the translator's trade or academic linguists are always accused of thinking of aesthetic values, neglecting the hard economic pressure under which text production in, say, a large administration lives, computers or no computers. This is wrong. I am myself, like the majority of my colleagues, a reassuringly prosaic person. And the kinds of linguists who have investigated the matter in some depth are exactly such as are interested in language as a communication tool, examining its 'technical' features in an informative process. The criticism, which is more or less unanimous from all who have a professional insight into text evaluation, is not that the texts sound awkward but that they are inefficient because the style makes reading very cumbersome, often bars understanding altogether and occasionally suggests a wrong meaning.

To investigate intelligibility, an investigation was made at KVAL by a seminar, led by Max Gorosch and consisting of professional translators with very vast practical experience and an interest in scientific analysis. Unedited machine output from the English-French machine translation system installed at the European Common Market administration in Brussels was analyzed. It was first noted that the amount of editing necessary to turn this into proper French was considerable. Not only had minor corrections to be made, as is customary in revision work, but quite often whole sentences had to be entirely rewritten.

To see to what extent these amendments were really necessary for comprehension, texts were given to some participants to read without access to the original. Since the texts look rather similar to French on casual reading – if you disregard some conspicuous barbarisms – it was surprising to find that these trained readers failed. On every page there were several passages where they could not reconstruct the meaning. These passages were later analyzed sentence by sentence, and the conclusion was that they were not difficult but impossible to understand. Native knowledge of French, good proficiency in English, years of training in the detective task of setting right what sloppy writers have confused, linguistic analysis and unlimited amounts of time were not enough to decode the text. The distorsion produced by computer processing proved to be irreversible.

The last defense line is, then, that the texts are not really intended for reading in the common sense of the word but, as the phrase goes, to provide the user with 'current awareness'. In other words, since machine translation as implemented today cannot cater for the translation needs as known today, it launches a new product, let us call it 'skim-only-translation', SOT. There is nothing wrong in trying to create a market for a product when we happen to have one (which does not suit the market it was intended for). Is there a market for SOTs – raw translation delivered cheap and fast?

Considering that these texts can only serve the need for a general overview of what is written about, they are not cheap and simple enough. They are too sophisticated, since the rendering of grammatical constructions (which we are not, as readers, prepared to trust anyhow) is not needed. It is overkill to translate *who* and *and* and *it* if just a content skeleton is what we hope to get. A mere translation of all words, except for a few grammatical words, without any attempt at grammar, gives the expert in the field a good way of following the development of the argument.[1] Just as, say, a politician or economist may successfully pretend he can read foreign books in his field if only he masters a small set of key terms, he will be able to do the same without learning even those terms if we give him a word-for-word translation of all non-non-key-words of the text.[2] Further, if a contents survey is what we really want, we can most often get it cheaper and better by asking a person who reads the language of the document and who is familiar with the client's purpose to summarize the relevant points in a few words.

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By and large, then, automatic translation, has failed as a practical undertaking. The output of the best systems so far available is a very poor text – when it can be called a text. Linguistically much more adequate and computationally better designs exist in prototype version – I am thinking particularly of the Geta system constructed at the University of Grenoble. But we know now, from experience as well as from theoretical considerations, what some wise people said 25 years ago, that the fundamental problems are so complex that there is no hope that the machine output will be anything but very inadequate for a long time yet to come except for very stereotype texts. It is not only that the present performance is poor; it will necessarily remain so the foreseeable future. The development to be expected in the next few years is that the requirement on stereotypicity can be slackened and, more important, the cost to implement a tailored system for a given genre reduced.

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[1] It is in fact a *better* way than faulty translation, since the procedure is completely transparent. Machine translation, by trying to be intelligent, introduces what the reader sees as inconsistencies. He can *not* rely on the machine to render each word the same way each time!

[2] The term is current in information retrieval, where sometimes all words are used as keywords in an automatic procedure unless they are contained in a particular list of non-keywords, also called the 'stop list'.

What can be offered, then, is mass production of poor text. But that is exactly the kind of product for which we have already an over-capacity! The problem is high-quality, not crude translations. The best machine translations are still far below the quality of the mediocre translators. And the cost, even if computer time and program costs are set to nil in the calculation, is competitive only if machine-readable input is available: mere data entry – which costs about what ordinary typing costs – is more expensive than the fee to a non-specialist translator for translating, and proof-reading.

## 2.2 Support for translators

Whereas enormous resources have been spent on replacing the translator, very little has been done to help him by giving him tools to promote his productivity and reliability, not to mention convenience and pleasure. Many translators of top professional capacity still waste time over inserting corrections in carbon copies. Computer support for the not very heroic tasks of simple text editing are rarely placed at the active translator's disposal. One might reflect over the reasons for this non-use of existing technology. The research centers have been ignorant of or uninterested in such trivial but useful matters; the translators themselves are often free-lancers or otherwise operating in organizations with small resources for capital investments; the large translation organizations are often governmental and have a built-in conservatism.

However, some very promising developments on the immediate practical level have been made in the last few years.

More sophisticated tools at the disposal of some translators today are term banks and some other data banks for reference data. The value of such services would be greatly increased if text editing and communication functions were properly installed. There is today a gap between the ambitions of terminology centers and the commonplace of the translator's daily life. Few people have found it worth their while to study how the translator can in practice integrate these external services. If the term bank information or computerized dictionary is not at his finger top command, they will be used rarely. Even if the translator need not leave his office to go to an enquiry desk but has his own electronical work station, the interrupt costs too much. He cannot afford to log out from his text editor, log in with some term data bank, make his enquiries, note down the results on a paper slip, log out from the data bank, log in again in his editor, retrieve the file and the place he got stuck at, insert the information he jotted down on the paper slip. That kind of slow-motion computerization is not competitive with what he does today, viz., lift the telephone receiver and call a friend – or just skip the problem and make an intelligent guess.

## 3. Mechanizable subtasks

What are the essential functions of a translator and where can he be helped?

### a. Typing and correcting

An important and dull part of a translator's job is of course to type and retype the output. Ambitious craftsmen would perhaps stress the retyping – only those who are very sloppy stylists believe that their first version is good enough without any amendments. Automatic functions can take over much of the (re)typing.

### b. Reading

Further, while his task is ultimately to write, you are likely to find a translator reading if you surprise him at work. Or looking for a passage to read.

And he does not primarily read dictionaries or term lists as many terminologists believe. In his special field he consults them occasionally but almost never while actually translating. A well-known translator phrased his attitude towards printed dictionaries thus: 'Dictionaries? I don't read them, I write them.'

Important sub-tasks for a translator are to extract information from

*i* dictionaries
*ii* term banks
*iii* background literature
*iv* the client
*v* colleagues and friends
*vi* the source text document and the not-yet-ready translation.

It might surprise some people that the last item is, quantitatively, the most important one. The translator keeps turning pages back and forth, to compare and verify. And it takes time to retrieve, even among as little as a dozen pages one has written oneself – or one's colleague wrote last night – the passage where the same expression appeared. New techniques for information retrieval can operate within a general computer-based editing system.

### c. Verification

A heavy part of the job is what is often disdainfully called proofreading, which includes checking correctness and consistency on many levels, from spelling upwards. No tools are offered for this task today, but intelligent text processing procedures could help.

To summarize the support functions which are desirable and reasonable to promise:

- powerful text editing techniques
- intelligent information retrieval
- some level of the computer's text comprehension to make the system capable of detecting at least some errors – or at least to warn when inconsistencies are introduced which with high probability are unintentional.

These capabilities, clearly, are necessary for many other intellectual tasks as well. Translation is not that special!

### d. Editing functions for translators

One may add some special functions. Thus, though the machine will not be let loose to translate long passages for subsequent rewriting, an attractive function in a future complete package would be 'Suggest translation of phrase xxx'.

In its simplest version that function would merely echo recent renderings made by the user. A more sophisticated model will include everything we today have in translation programs. Automatic translation, then, as a *practical* facility, should be seen as one macro of an editor!

## 4. Directions for research

To be able to supply translators with better tools, where should the impetus of research be directed?

**a. Translation theory**

The study of what translation really is and how the human proceeds is fundamental; there remains much to be done, and the results which have been obtained in studies unconnected with computerization are often not exploited. Here, as so often in other areas, research is delayed by mutual ignorance between different professional groups.

**b. Man-machine interaction**

Text-editing facilities must be elaborated with better technology. This is primarily a technological problem – with, say, split-screen terminals, better visual presentation, integration between different computer programs – but there are also linguistic aspects of how man and machine could enter into an efficient dialogue.

**c. Communication and networking**

The use of the computer as a means of communicating with other persons, information banks and institutes again requires study both of technical integration and linguistic capabilities. The concept of computer conferencing and electronic mail – intensely studied today in computer science – should be followed by the applied linguists (and their more theoretical colleagues; we are here involved with new manners of using language in writing).

**d. Retrieval**

Merely to recognize previous instances of a phrase requires non trivial programs. Did we have 'take into consideration' before and how did I translate that? – We must find at least cases like 'He did not take this into immediate consideration', perhaps also the passage 'not considering the costs', neither of which match letter by letter.

Here, as elsewhere, more powerful retrieval capacities require powerful linguistic analysis – of essentially the same complexity as that of a machine translation system.

**e. Linguistics**

Linguistic analysis and synthesis, on all levels, clearly depends on deeper insights into structures and processes.

**f. Text comprehension**

One might wonder how a computer, which is not trusted to make simple translations on its own, could help correct and guide the human translator. However, simple checks can be made with present-day technology – warnings against what seems like spelling errors and some other inconsistencies – and some more sophisticated warnings have been elaborated (i.a., in a KVAL project, Term-Tuning, carried out together with the Ministry of Justice in Helsinki, for the evaluation of bilingual law texts). We here soon approach high-level artificial intelligence.

The recommendations for research planning, therefore, are
**a** to exploit immediately the simple tools we know will function as an integrated 'Translator's assistant' (as Martin Kay has called it in a paper where he elaborates this point; cf the Reference *infra*), capable of being successively extended to host the more sophisticated procedures.
**b** to invest now in serious long-range research projects in these areas.

Machine translation is a good exercise for the basic studies underlying a, e and f, possibly also b and d. Meagre funding of machine translation is therefore unjustifiable.

With this 'failsoft' approach, complex computer procedures can be inserted into an open-ended system without ever harming immediate operation. The human editor-translator retains his decision-making position.

## 5. Impact on theory

The indicated approach begins in a rather anti-intellectual way by suggesting the use of known but not well exploited techniques. In the subsequent steps, the translation system – or shall we say 'general interactive bilingual editing system'? – should host a large number of elaborate procedures for very advanced linguistic processing. These will concern a number of fundamental linguistic problems, not only those which schoolboys and managers believe to be the core of translation, like grammar, dictionary lookup and spelling. We will be forced to confront problems connected with retrieval operations and long range text structure and ultimately to face the problem of making machines in some sense 'understand' the text. There is much to learn from these efforts. Many new theories will be suggested by such work and – I feel warm at heart when I think of it – many loose 'models' of Language, Man, Machine and the Universe will be shattered.

The attempts at computerization of translation has brought with them, or rather reminded us of one important insight already: no human linguistic performance, however 'mechanical' it may seem, is the application of one isolatable skill. It is no coincidence that translation turns out to need the same capabilities as does information retrieval or man-machine dialogue.

Language can be cut into slices for examination only; when it works, it works as a whole. When computers learn to do better than they do today, they will have to exploit simultaneously many kinds of knowledge – syntactic, semantic, pragmatic or how we may choose to label the categories of rules or data – mimicking in some way the broad human approach. It was a grand but entirely unpractical idea to try to translate by dictionary and lexicon alone. But it was worth trying, if only to gain this keener sense for the wholeness of human performance.

*Reference*

KARLGREN, H & D WALKER (eds.). 1969. Computer aids in translation. Practice, prospects and recommendations for research and development. A report from an international seminar arranged by KVAL under the auspices of FID/LD and AILA. In press.

## Computer Aids in Translation

*Introduction*

An international group of experts, under the auspices of FID (International Federation for Documentation) and AILA (International Association of Applied Linguistics), is preparing a report on *Computer Aids in Translation* to asses the state of the art and to establish guidelines for research and development in the area.

The theme includes all uses of computers for translation purposes, ranging from computer-based text editing for translators and revisors, to machine translation, unaided by human intervention.

At a meeting arranged by the KVAL Institute for Information Science (Stockholm, Sweden) over the weekend of 7–10 September 1979 at the Chateau d'Hanzinelle near Brussels, nineteen experts from nine countries outlined the present situation and made forecasts and recommendations for future efforts. The results were presented at a panel discussion sponsored by the Association Belge de Documentation at the Bibliotheque Royale in Brussels on 11 September 1979. We here briefly summarize the conclusions.

*What computers can do now*

Provide general word-processing capabilities for editing and revising texts, such as are becoming common in newspaper publishing houses;

Provide facilities for instant access to a variety of information required by translators: terminology banks, dictionaries, translations of similar texts, and reference materials;

Provide means for easier communication between translators, terminologists, and other experts, presently available, at best, using telephones, conversations, and postal services;

Produce rough translations, quickly and without human intervention, that can be used for current awareness programs;

Provide adequate translations in narrowly constrained fields with specialized language use (such as weather reports) with the intervention of translators for difficult sentences, thereby relieving the translators of the tedium of repetitive material.

We conclude that substantial savings can be achieved immediately in comparison with current translation practices. These savings are available using existing techniques, particularly if adequately combined. We note that they are presently being used by some organizations and are open to inspection.

### *Critical areas for basic research*

Investigation of the actual process of translating;

Development of criteria and procedures for evaluating the quality and functional adequacy of translations;

Study of the characteristics of language used by professional groups or otherwise for special purposes that require translation.

### *Most promising directions for research and development*

Encouraging developments are expected in the area of refined combinations of machine and human cooperation, rather than attempts at complete automatization. Mere post-editing of machine output does not seem to be a realistic way of producing adequate translation.

A computational system of modular model can make profitable use of the advanced mechanical translation designs which exist already in prototype or are being developed.

Modern "interactive computing" differs greatly from conventional computer processing. It makes possible "failsoft" systems in areas previously beyond the reach of computers. In a suitably designed fail-soft system for translators, responsibility and control of all processing remains with the translator, and the machine simply increases his productivity. Such systems allow small-scale experiments and the collection of valuable, but hitherto unavailable, information on the methods and work habits of professional translators.

*Conclusions*

The consensus of this international group of experts is that fully automatic, high quality translation is not feasible in the foreseeable future. Fully mechanized translation will have to be restricted, as it is today, to very specialized and highly stereotype kinds of text or toapplications where quality requirements are exceptionally low.

However, there are highly promising prospects for successful combinations of human and machine. Thus, while there are several areas for immediate application of techniques that are well known but little used today, support for long term and high risk experimentation and for fundamental research must be intensified if there is to be future improvement.

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# QUANTITATIVE CONTRASTIVE ANALYSIS

My remarks today will consist of two parts. I shall first situate Quantitative Contrastive Analysis (QCA) in the context of various other types of contrastive analyses (CAs). In the second part I shall give an account of one particular research in the area of syntax and suggest its possible relevance in foreign language pedagogy.

In another paper (Krzeszowski in press) I suggested a taxonomy of contrastive linguistics based on the kind of *tertium comparationis* employed in specific studies. Crucial in this taxonomy is the concept of *2-text*, which is connected with the fundamental assumption that, with the possible exception of phonological and lexical contrastive studies, all other CAs must employ equivalent texts as primary data. Differences between various kinds of CAs hinge upon different senses in which the concept *equivalent* is employed. Therefore, any typology of CA, will be primarily determined by the specific type of equivalence as a relation between texts in two or more languages. It is convenient to use the term *2-text* to refer to any pair of texts, written or spoken, which are used as data for CAs. The constituent texts of any 2-text are related through different kinds of equivalence, depending on the kind of CA which is performed on them or through them.

The first division is drawn between *text-bound* and systematic CAs. It reflects the familiar distinction between *la parole* and *la langue*. Text-bound CAs consist in the studies of equivalent, written and/or spoken texts and do not, as a matter of principle, aim at generalizations concerning the languages in which particular texts are written.

*Systematic* CAs are related to text-bound CAs in the same way in which the study of language is related to the study of text. Such studies are *projective* if they go beyond primary linguistic data found in texts and provide generalizations about various aspects of the *structure* of the compared languages as well as systematic relationships and correspondences between equivalent elements of the compared languages. Texts which serve as primary data for systematic CAs must be in relation of equivalence which is both semantically and formally more constrained than in the case of texts used for *corpus-restricted* studies of translations. In the former case we deal with idealized data and that is why the relation between the compared texts constituting primary data for systematic CAs is called *ideal equivalence* (Krzeszowski 1979). In the latter case we deal with actual translations, which are seldom, if ever, semanto-syntactically equivalent. On other occasions I have stressed the fact that unrestricted translations cannot be used as data for systematic grammatical CAs for which one must use as data semanto-syntactically equivalent texts, i.e. "closest approximations to acceptable word-for-word translations and their paraphrases if such exist." (Krzeszowski 1979; 1981). Therefore, texts which serve as a basis for systematic CAs must be *structurally* constrained. Such texts provide raw material not only for systematic syntactic CAs, i.e. studies of various types of constructions across languages but also eventually for comparative studies of rules and systems (cf. Krzeszowski 1976). However, no such semanto-syntactic constraints have to be imposed on 2-texts that serve as data for corpus-restricted CAs of translations. Such 2-texts must be recognized as acceptable translations according to criteria largely independent of semanto-syntactic ones.

In the present paper I shall not talk about various kinds of systematic CAs(SCAs) with the various types of equivalence characterizing 2-texts for such studies. Instead I shall deal with one type of text-bound CAs which I shall call Quantitative Contrastive Analysis (QCA). QCA may but does not have to use translations as primary data. It is possible to conduct QCAs on texts which are not translations and which are not equivalent in any of the senses of the word "equivalent" (cf. Krzeszowski in press). The constituent texts of 2-texts used for QCA may be chosen for comparison only on the grounds that they represent the same register, or the same style, or the same literary genre, or on any other grounds which provide the common platform of reference motivating the comparison. Such texts will probably exhibit *statistical equivalence* by representing a certain fixed pattern of frequencies of occurrence of various linguistic forms characterizing a particular register, style, genre, etc. These patterns of frequencies characterize specific "styles" in particular languages by following a certain statistical norm. Deviations in plus or minus from such a norm may be connected either with non-native performance, as we shall see later, or they may be deliberate as in parodies.[1]

[1] A parody typically involves a high concentration of forms which are already outstandingly frequent in the text which serves as the object of the parody. One can envisage studies aimed at a statistical account of parody.

In the paper already referred to (Krzeszowski in press) I intimated that SCAs, no matter how detailed and refined, are of limited pedagogical value, unless supported by quantitative data. The aim of the present paper is to substantiate this claim.

To start off let us consider some typical findings obtained from SCAs. Thus syntagmatic and paradigmatic criteria lead to establishing systematic equivalence between Polish and English personal pronouns: *I* – "ja", *you* – "ty/wy", *they* – "oni/one", etc. Correct as far as it goes this generalization is extremely inadequate for several reasons. For example it does not say anything about the appropriateness of specific pronouns in specific situations. Above all it does not say anything about the relatively low frequency of occurrence of personal pronouns in Polish texts in contrast to a relatively high frequence of occurrence of personal pronouns in English texts.[2]

Systematic contrastive generalizations prove to be even less adequate in all those numerous cases in which a particular construction in one language has more than one nearly synonymous equivalent in another language. Some of these equivalents may turn out to be nearly congruent, i.e. they may consist of the same number of constituents arranged in the same order (cf. Krzeszowski 1976, Marton 1968). In such instances systematic CAs would predict no learning problems but rather something in the nature of positive transfer. In reality, however, different frequencies of occurrence of such congruent forms in continuous texts could result in errors consisting in either using such congruent forms too frequently or too rarely. In the former case we would be dealing with "errors of abundance", in the latter case with "errors of avoidance". In either case the frequency of use by non-native users of the language would be different from the frequency of use by native users. Let us consider the following example. The French construction "après être revenu" can be rendered in Czech (Bečka 1978) and in Polish in a number of ways, none of which is a congruent equivalent of the French original:

| | | | |
|---|---|---|---|
| Prepositional Phrase: | Czech | *po navratu* | |
| | Polish | *po powrocie* | "after the return" |
| | French | *après le retour* | |
| Active Past Participle: | Czech | *vrativ se* | |
| | Polish | *wróciwszy sie* | "having returned" |
| | French | *étant revenu* | |

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[2] Foreign learners of Polish characteristically overuse personal pronouns, especially *ja* "I", presumably often under the influence of their native language where pronouns appear more frequently.

| | | | |
|---|---|---|---|
| Subordinate Clause: | Czech | *když se vrátil* | "when he returned" |
| | Polish | *kiedy wrócił* | |
| | French | *quand il était revenu* | |
| Main Clause: | Czech | *vrátil se a …* | "he returned and …" |
| | Polish | *wrócił i …* | |
| | French | *il était revenu et …* | |

Bečka discusses this example in the context of quantitative constrastive stylistics and observes that "In the translation process a grammatical phenomenon has become a stylistic one" (Bečka 1978:129). As a stylistic problem it is primarily a problem in the frequency of use. All these constructions in the three languages are nearly synonymous and can be arranged in pairs which exhibit a certain degree of formal resemblance. SCA would assign to those pairs the status of equivalence and would discover formal differences resulting from the application of non-identical rules involved in the derivations of these constructions. Some valid generalizations could thus be made about systematic differences and similarities of specific constructions across languages. Such systematic analyses would provide no clues to the ways in which native speakers employ these equivalent constructions in actual texts. The fact that there is an equivalent or even a congruent construction in a target language does not necessarily mean, and in fact rarely does, that it is employed with equal willingness by native users of the language. In fact frequencies of occurrence of equivalent constructions are often different. For example, a native user of French would seldom use "après le retour" as an equivalent of the Czech "po návratu" or the Polish "po powrocie", although in terms of SCA such pairs would constitute ideal equivalents (cf. Krzeszowski 1979); yet in statistical terms they would probably have to be considered as non-equivalent.

In her constrastive study of simple sentences in Czech and English Duškova notes that "One of the features in which Czech and English differ is the tendency of English to what has been called complex condensation, viz. the use of non-finite verb-forms where Czech has subordinate clauses" (Duškova 1978:83). The differences, according to Duškova, may be due to systematic differences in those instances in which English possesses certain grammatical forms that Czech lacks (e.g. the gerund) or they may be due to more restricted uses of Czech forms as infinitives, participles as well as perceptive and causative verbs.

In quantitative terms "more restricted uses" may suggest lower frequencies of occurrence in texts, although this is not always necessarily the case. For instance, the fact that in Polish infinitives do not appear as object complements in the constructions commonly called "accusativus cum infinitivo'' nor in their passive counterparts called ''nominativus cum infinitivo'' means that they have ''more restricted uses'' or, strictly speaking, that they have a more limitied distribution. But it does not mean that infinitives are less frequent in Polish texts than in English texts. As a matter of fact, according to my own investigations about every 65th word in continuous Polish text is an infinitive while only about every 90th word in a continuous English text is a marked infinitive. Therefore Duškova's surmise that the statistical tendency in English to complex condensation may be due to systematic differences must be regarded with caution. Whether or not there is a direct correlation between the number of various infinitival constructions and the frequency of occurrence of infinitives in continuous texts is a matter that remains to be investigated.[3]

In the present paper I would like to give an account of one particular quantitative study which probably has pedagogical relevance. I believe that QCA is one way of approaching the poorly investigated phenomena connected with ''errors of avoidance'' and ''errors of abundance'', which cannot be handled by SCAs since the very concepts of ''avoidance'' and ''abundance'' are quantitative rather than qualitative in nature. Interestingly enough it has been observed that differences in the frequency of use of certain constructions are connected with the native vs. non-native use of a language. For example Graczyk (ms) noted the tendency of Polish learners of English to overuse extraposed subjects as in ''It is a fact that it is hard to convince people that there is much sport in boxing''. Although grammatical, the sentence suffers from clumsiness which could be eliminated by writing ''Boxing may/can be a good sport, though few people know/admit it''. According to Graczyk's investigations one finds fewer extraposed subjects in compositions written by native speakers of English. This sort of overuse of a favourite construction could be labelled ''error of abundance''. One can easily envisage the opposite tendency to avoid certain types of constructions. If an FL learner manifests this tendency in his writing and/or speaking he is committing an ''error of avoidance''. In either case he deviates in plus or minus from a certain statistical norm which characterizes a native performance in a particular language. To ascertain such an error one has to perform a QCA of texts written by native users of a particular language and by non-native users of the same language. In more fashionable terms one has to conduct a QCA of texts written in a target language (by native users) and texts written in an interlanguage (by FL learners). Whatever differences in frequencies of occurrence of various linguistic forms in native and non-native productions are thus discovered are of great interest in themselves, as they can prompt teaching strategies that could lead to the elimination of both thypes of frequency errors. One cannot pause here however, without pondering about a possible impact that native frequency patterns of distribution might have on the performance in a foreign language. It would seem that the performance in a foreign language would be determined by the frequency patterns of distribution of equivalent forms in texts of the native language. One could hypothesize that this indeed is the case and then proceed to verify this hypothesis in the course of statistical research. In order to test this hypothesis I conducted a small preliminary piece of quantitative research whose results were at first astonishing in that they contradicted the contrastive predictions but in the end yielded themselves to a reasonable explanation.

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[3] Such a correlation is highly plausible as Polish employs infinitives in certain ways in which English does not. For example as categorical imperatives in *trzymać sie mocno* ''hold it tight'' or such constructions as *trzeba nam myśleć po mowemu* ''it's necessary that we think in new ways'', literally ''needs us to think anew''. Without more extensive investigations in more than two languages it is impossible to demonstrate a direct correlation between more restricted contexts in which particular forms appear at the level of language description and less frequent occurrences of these in continuous texts, even if such correlations can be hypothetically expected.

I investigated frequencies of occurrence of Gerundive and Action Nominals (GA nominals) in M. A. theses on linguistics written by two Polish students (both non-native, quite average students of English) and in a Diploma thesis written by a native user of British English. For the purposes of this particular research no distinction was made between Gerundive Nominals and Action Nominals ending in *-ing* as described in Lees (1963), so that the two kinds of *-ing* nominals were described jointly. However, Action Nominals ending in suffixes other than *-ing* as well as full nouns ending in *-ing* (Regular Gerunds in Lees' misleading terminology) were excluded. The frequencies of occurrence of GA nominals were calculated in realtion to the number of sentences constituting the three dissertations (citations and illustrative examples were omitted from the count). For convenience I shall refer to the two theses written by the Polish students as $PE_1$ and $PE_2$, respectively, and to the thesis written by the British student as BE. The frequency of occurrence of GA nominals in BE was significantly higher than in $PE_1$ and $PE_2$. Whereas in BE the number of GA nominals averaged 0.26 per sentence, in $PE_1$ it amounted to only 0.09 and in $PE_2$ to even less, viz. 0.07. Characteristically $PE_2$ was graded as the lowest passing ("satisfactory"), while $PE_1$ was evaluated one grade above the lowest passing ("good"). Table I contains the relevant figures.

In order to see to what extent the frequency of occurrence of equivalent Polish nominals in Polish continuous texts might have negatively influenced the performance of the two Polish students in English a QCA of trans-

Table 1.

| | BE | $PE_1$ | $PE_2$ |
|---|---|---|---|
| Number of sentences | 300 | 231 | 341 |
| Number of GA nominals | 78 | 21 | 25 |
| GAs per sentence | 0.26 | 0.09 | 0.07 |

lationally equivalent (cf. Krzeszowski 1979; in press) texts in English and Polish was undertaken. As in English, one encounters problems with the classification of nominals in Polish. In Polish the so called *Nomina Actionis* basically fall into two groups called *Substantiva Verbalia* (SVs) and *Substantiva Deverbalia* (SDVs). SVs differ from SDVs in that the former are morphologically regular, as they take regular suffixes *-anie*, *-enie*, *-cie* and can be formed from nearly all verbs (with very few exceptions which can be easily listed). SDVs are formed from a fairly limited number of verbs and abound in alternative forms which do not obey any obvious rules. In comparison with English, SVs are closer to Lee's Gerundive Nominals as they are more "verby" in nature, while SDVs are closer to Lees' Action Nominals and Regular Gerunds by being more "nouny". A very detailed SCA of morphological, syntactic and semantic properties of Polish nominals in contrast with English nominals can be found in Lewandowska (1975) and need not be recapitulated here. A detailed description of Polish nominals can be found in Puzynina (1969) and Grzegorczykowa (1979). The equivalent English phenomena are described in Lees (1963) and Fraser (1970).

Since Polish *Nomina Actionis* fall into two groups, while English corresponding nominals fall into three groups, from the point of view of QCA there arises the problem of what to count and what to compare. The situation can be visualized thus:

*Puzynina's Polish Nominals*

Substantiva Verbalia "Verbal Substantives" regular:
*pisać – pisanie*
*mówić – mówienie*

Substantiva Deverbalia "Deverbal Substantives" irregular:
*pisarstwo, mowa*

*Lees' English Nominals*

Gerundive Nominals regular:
*write – writing*
*speak – speaking*

Action Nominals regular:
*write – the writing of*
irregular:
*discuss – discussion*

Regular Gerunds regular:
*fill – one filling, two fillings*

It appears that Gerundives are the least "nouny" while Full Gerunds are the most "nouny" (cf. Ross 1972). In Polish Verbal Substantives are less "nouny" than Deverbal Substantives. The comparative problem consists in the fact that, on one hand, Polish verbal substantives seem to combine some characteristic features of both English Gerundive Nominals (*teaching English*) and Action Nominals (*the teaching of English*), while on the other hand, Polish Deverbal Substantives combine some features of English Action Nominals and of Regular Gerunds. The situation is further complicated by the fact that whithin the Polish Verbal Substantives (in *-anie*, *-enie*, *-cie*) it is possible to distinguish between at least two subcategories, of which one is more "nouny" than the other. Thus alongside with such verbal nouns as *czytanie* "reading", *mówienie* "speaking", which are clearly verbal substantives (or Gerundive Nominals in Lees' terminology) we also have such regular nouns as *wprowadzenie* "introduction", *użycie* "currency", "use", etc., which resemble English irregular Action Nominals, but unlike the latter retain regular suffixes. The most "nouny" Polish nominals, i.e. full nouns called Deverbal Substantives have irregular and unpredictable suffixes of various sorts, which accompany morphophonemic and semantic shifts. In that latter respect they resemble English irregular Action Nominals rather than Full Gerunds, which regularly take the suffix *-ing* and form regular plurals with *-s*. If we assign numerical indices to the three kinds of nominals in Polish and English indicating the rank on the scale of "nouniness", we shall obtain the following situation:

*Polish*

1. Verbal Substantives$_1$ (regular)
2. Verbal Substantives$_2$ (regular)
3. Deverbal Substantives (irregular)

*English*

1. Gerundive Nominals (regular)
2. Action Nominals (regular and irregular)
3. Regular Gerunds

Thus at the level of "nouniness" 2 we have a regular morphological situation in Polish and a highly irregular situation in English. At the level of "nouniness" 3 we have an irregular morphological situation in Polish and a regular situation in English. Unfortunately, one cannot rule out the possibility that the two taxonomies are based on erroneous criteria. For example Lees' distinction between Gerundive and Action Nominals is based on a mixture of morphological, syntactic and semantic properties. As a result Action Nominals comprise both regular *-ing of* formations and irregular ones.

For the purposes of the present study it was necessary to unify the criteria by restricting them to morphological ones alone. This meant that in both Polish and English only regular formations were considered. These included all Polish forms in *-anie*, *-enie*, *-cie* and all English Gerundive Nominals as well as those Action Nominals which take the regular suffix *-ing*. Lees' Regular Gerunds were excluded from the count following another *morphological* criterion, viz. the ability to form plural by taking the plural inflection *-s*. This property places regular gerunds outside all verbal forms, on the very top of the scale of "nouniness". On the other hand no such elimination was possible in Polish as only *semantic* criteria can be used to distinguish the more "nouny" from the less "nouny" of the Polish Verbal Substantives. All the same semantic properties will be referred to in an attempt to explain the somewhat unexpected results obtained from the study.

In view of the results of QCA of PE$_1$, PE$_2$, and BE one would have expected similar results from a QCA of a Polish text written by a native user of Polish and a text written by a native user of English. In this way the scanty use of GAs in the Polish-English interlanguage (PE$_1$ and PE$_2$) would be accounted for by the negative transfer of presumably low frequencies of occurrence of nominals in Polish texts. However, it turned out that the hypothesis about the negative transfer in the case of the frequencies of nominals from Polish to English is false.

Two texts were compared with regard to the frequency of occurrence of English GA nominals ending in *-ing* and of Polish SVs. The first 300 sentences of J. Lyons's *Introduction to Theoretical Linguistics* were examined and compared with a very "Polish-sounding" version of the same book translated from the original by Krzysztof Bogacki under the title *Wstep do jezykoznawstwa teoretycznego*.

In the original version 60 GA nominals were found. Thus the average occurrence of GAs was about 0.2 per sentence and corresponded to the results obtained from the previous study. In the Polish text as many as 208 regular nominals were found which gives the average frequency of occurrence as high as 0.7, which is significantly higher than in English. A closer qualitative look at the data helps to understand this enexpected result. It turns out that only about 80 of the total 208 words in *-enie*, *-anie*, *-cie* constituted the less nouny words of rank 1 on the scale of "nouniness". These average to 0.26 sentence, i.e. almost like in the case of English GA nominals. Interestingly enough among them there were many words which corresponded to English full nouns rather than to Gerundive Nominals or regular Action Nominals. They were such words as *wyzwolenie sie* "emancipation", *zepsucie* "corruption", *założenie* "establishment", etc. As a matter of fact only as few as 24 of the Polish SVs corresponded to English GA nominals ending in *-ing*, which constitutes only about 10% of all occurrences of SVs in Polish. This situation offers a hint suggesting factors which influenced the Polish-English interlanguage in which $PE_1$ and $PE_2$ were written. It appears that in a preponderant majority of cases Polish SVs correspond to English full nouns of irregular Action Nominals as their lexical equivalents. Therefore, Polish learners of English associate Polish VSs with English full nouns rather than with *-ing* forms of GAs as a matter of a general principle, following such equivalents as *dodanie* "addition", *stosowanie* "use", *odrzucanie* "refusal", *porównanie* "comparison", *spostrzeżenie* "insight", *użycie* "currency", *omawianie* "discussion", etc. Once such an association is formed it is easily overgeneralized to other instances. Such an overgeneralization is manifested in the learners' attempts to find a lexical equivalent for *every* Polish SV rather than follow a possible transfer rule from a grammatical rule deriving VS's in Polish to a grammatical rule deriving GA nominals in English. Presumably no such transfer rule has been formed in the case of the authors of $PE_1$ and $PE_2$. The absence of such a transfer rule of grammar and the overgeneralization of the lexical transfer account for the non-native performance in $PE_1$ and $PE_2$, manifested as "errors of avoidance" affecting the frequencies of occurrence of GA nominals.

The QCA described above leads to the following tentative conclusions:

1. QCAs are strictly dependent on SCAs in that the latter provide criteria for identifying linguistic forms to be counted in actual texts. For instance, the decision about the equivalence of the Polish forms in *-enie*, *-anie*, *-cie* and the English forms in *-ing* is only possible when systematic analyses of Polish and English noun-forming suffixes are taken into consideration. The results of such qualitative analyses provide structural categories which are then counted in the course of QCAs.

2. The preliminary research in terms of QCA suggests that the hypothesis about the native vs. non-native performance as manifested in differing frequencies of occurrence of certain forms is valid. In this case QCA consists in the quantitative comparison of texts produced by native and non-native users of the language. The deviations from the native norms are either in minus (erros of avoidance) as in the case of English nominals as used by Polish students or in plus (errors of abundance) as in the case of extraposed subjects, so frequent in the texts produced by Polish learners of English. Such QCAs might be called *intralinguistic QCAs*. If texts produced by native users in two different languages are compared we deal with *interlinguistic QCAs*. The results of QCAs in this area cannot, it appears, explain certain transfer phenomena, if these results are considered in isolation from other results of both qualitative and quantitative nature. Transfer appears to be determined by a complexity of factors and connot be accounted for by one particular kind of CA.

3. There seems to exist a need for massive statistical research involving both intralinguistic and interlinguistic QCAs that could eventually lead to a better understanding of the complex phenomena of transfer as well as those parameters which characterize native and non-native performance in a foreign language. The practical validity of such research is easy to appreciate. For example, one result of such research might be a quantitative description of "individual style" at the plane of interlanguage. One can expect the Polish interlanguage of English to be quantitatively different from the Hungarian interlanguage of English, etc. Each national interlanguage of English is probably characterized by a unique matrix of frequencies of occurrence of various linguistic forms. It goes without saying that a claim such as this must remain a speculation until the appropriate research along the lines suggested in this paper is undertaken and concluded. In this way we could embark upon a new area of investigation, which will, hopefully, keep contrastive linguistics alive for some time to come.

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# APPLES OF GOLD IN PICTURES OF SILVER: WHERE HAVE ALL THE WORDS GONE?

*"I love smooth words like gold-enameled fish*
*Which circle slowly with a silken swish"* (Elinor Wylie).

Having stated my bias, let me range myself with much of humankind: my fellow word-lovers. Riddles, word puzzles, acrostics, puns fascinate and delight. Slips of the tongue (malapropisms or spoonerisms) are a pleasure; at most, they provoke mirth and gentle teasing. "Redundable" (for redundant and replaceable) pleases, rather than irritates. Intuitively, we feel it is a word we needed. The comic, the professional word-manipulator, is always sure of an audience. Language, the possession and preoccupation of us all, is not dry bones. It is a living, growing entity, clothed in the flesh of words: flexible words which, chameleon-like, change and blend to create new meanings.

Why then have we, who love words, whether linguists or language teachers, seemed, more recently, to eschew them, to ignore their essential role in communication through another tongue, claiming that structure, syntax, grammar (whatever we may prefer to call it) is what must be learned first – and well – before we bother our students with too many words?

This emphasis, it seems, is of recent mintage. Comenius, the influential language teacher and materials developer of the seventeeth century, was not afraid of words. His *Vestibulum* (Waystage?), with materials for a child's conversation, contained a few hundred words arranged in sentences, while his *Janua Linguarum* (Threshold? or at least Entrance) was to contain all the common words in the language, about 8,000 in number. "A *Janua* should remain a *Janua*," he said, criticizing some overzealous contemporaries; it should not be stuffed with uncommon words (*The Great Didactic:* 204, reproduced in Hesse 1975:116). The sentences in the *Janua* explained the nature of objects. Thus, in Comenius's method, children learning another language were, at the same time, finding out about new and interesting things (not just their names but their functions) through examination of objects, descriptions, and labeled pictures, which the language learners would be encouraged to copy and label for themselves. In his *Orbis Sen-*

*sualium Pictus* (1658), this approach was used for simultaneous presentation of Latin, German, Hungarian, and the vernacular, Czech (see reproductions in Kelly 1969: 19).

Comenius's labeled pictures remind us of the object lesson emphasis of an equally influential educator, whose work straddled the 18th and 19th centuries, the Swiss Pestalozzi. Though not usually cited for his ideas on foreign-language learning, Pestalozzi stated unequivocally that "the natural method of learning the mother tongue or any other language" was "connected with the knowledge acquired through observation and the natural procedure in the learning of both must be in harmony with the course of nature according to which the impressions derived from observation pass over into knowledge" (Pestalozzi in Hesse 1975:250; Jedan 1981). As an example of the Pestalozzian influence on foreign-language teaching, we may cite R. Meadmore's (1905) *Object-Lesson Handbook*, a second conversation-book for teaching English to children in France. Here again informative content was learned along with the foreign language, the author intentionally introducing "en très grand nombre les termes correspondant aux objets et aux gestes esquissés dans (les) petits tableaux" that they were to accompany (Meadmore 1905:3). The readings and detailed pictures were intended to provide material for oral discussion. I quote an example from "The Bakery": "In the making of good bread, three things are absolutely requisite: flour or meal, yeast or leaven, and water containing salt .... The *baker* mixes these ingredients together and kneads them into a spongy mass called *dough*. This *dough* swells considerably and is weighed out into lumps which are shaped into *loaves*" (Meadmore, 1905:12).

Going back 250 years before Meadmore, we may compare this passage with a section on the *Panificium* (Bread-Baking) in Comenius's *Orbis Sensualium Pictus* which is in English and Latin (the numbers refer to equivalent objects in the picture accompanying the lesson). "The Baker 1. sifteth the Meal in a Rindge 2. and putteth it into the Kneading-trough 3. Then he poureth water to it, and maketh Dough 4. and kneadeth it with a wooden slice 5. Then he maketh Loaves 6. Cakes 7. Cimnels 8. Rolls 9. &c" (reproduced in Hesse, 1975:132–33).

Meadmore speaks of the need to teach children "une foule de termes concrets d'un emploi journalier dans la conversation" (Meadmore 1905:3). We may reserve judgment on the everyday usefulness of *meal, leaven*, and *kneading* for children's conversation, but the same emphasis on a great number of specific terms may be found in the writings of the Frenchman Gouin, the learning-through-physical-response exponent of the end of the nineteenth century, whose method achieved its greatest success in Germany. Like Comenius and Meadmore, Gouin emphasized the acquisition of a great number of specific terms in the new language (particularly verbs – action words which could be physically performed as they were used). His series introduced 8,000 words in lexical fields: topics and situations like *the home*, subtopic *the kitchen;* or *occupations*, subtopic *the carpenter*. Within these situations, students would act out very detailed sequences of appropriate actions in relation to objects, stating aloud exactly what they were doing with what. Thus the situational vocabulary was acquired along with the verb. (For examples, see Titone 1968:35–36; Rivers 1975:19, 1978:21.) "The specific substantives are more important than the general substantives," Gouin said. "The general terms are, so to speak, terms of luxury, which the language can upon necessity do without" (Gouin, tr. Swan and Betis 1892:76–77). As Gouin saw it, we are more likely to want to use the words *bus* or *taxi* than *vehicle; hamburger* or *bread* than *food*.

As the grammar-translation approach took over at the end of the nineteenth century, interminable lists of very specific words appeared at the beginning of every lesson. These were worked into complicated sentences for translation which skipped in desultory fashion from semantic area to semantic area. The ultimate in this use of vocabulary as the slave of grammatical ingenuity was inflicted on Sweet in his Greek class, when his master evolved the unforgettable sentence: "The philosopher pulled the lower jaw of the hen" (Sweet 1899, reprint 1964: 73).

The reaction against the increasing load of very specific words was manifested in the frequency count movement. Scholars tried to find out from analysis (of written materials at first) which were the most useful words for language-users, on the assumption that these should be learned first, and that elementary-level materials should be restricted to certain levels of the count (Rivers 1975:183–90; Rivers and Temperley 1978:204–12). The most thorough proposal for reducing the word-learning burden was Ogden and Richards's *Basic English* (1930), which, with a total vocabulary of 850 words, skillfully combined, could express practically any concept (Richards and Gibson 1974:27–29). "What is the difference," ask the creators of Basic English, "between visiting a man and going to see him, extracting a tooth and taking it out, forbidding a person solid food and saying he may not have it .... What we do is the same whether we bestow ten dollars upon a man or give it to him. The difference is a purely verbal one. We give an account in different words of the same thing. The second way ... keeps to the vocabulary and rules of the system of Basic English" (Richards and Gibson 1974:26). This kind of vocabulary limitation was possible for production of utterances by language learners, but it did not prepare them to comprehend the full flood of authentic speech or writing. Furthermore, since language learners had to analyze the concept to keep within the 850 words, this sometimes led to awkward combinations and paraphrases, which were more difficult for the non-native speaker to construct than it would have been to learn the more precise terms in the first place.

Frequency count developers took into consideration such important questions as range of use (in various domains and registers), coverage of lexical area, and ready availability to a native speaker – the *disponibilité* in the work of *le français fondamental* (Kelly 1969:184–207; Mackey 1965: 176–90). The paucity of nouns in the higher ranks of frequency (those specific content words Gouin had emphasized) was rectified in intuitive fashion by the developers of *le français fondamental* by the inclusion, for pedagogical purposes, of words associated with centers of interest (another Gouin concept). Nevertheless it soon became apparent that after the 200 most frequent words had been learned (these were for the most part function words, articles, pronouns, prepositions, conjunctions, some adverbs, and a few common content words like *take, put,* and *tell; time, name,* and *home*), the needs of the language learner in the area of vocabulary become very personal, depending on the student's interests and objectives, and the situations and topics associated with these (Rivers 1981:467–68). Since learners must eventually develop their own vocabularies for use, the intense interest frequency counts had generated began to dissipate.

The decline in emphasis on vocabulary learning was accelerated by movements in linguistics which concentrated on phonology, morphology, or syntax, with a corresponding neglect of semantics. With the growing popularity of audiolingual and similar structurally-based materials, students were encouraged to concentrate on grammatical sturctures for expressing their meaning, on the presumption that these structural frames could be fleshed out with words at a later stage when students were more certain of their lexical needs in particular situations. Unfortunately, for many that time never came. Many students discontinued their study of the language at the stage when they were able to shape utterances, but not to give them living meaning through judicious selection of lexical elements and collocations.

Hope seemed to dawn with the advocacy of notional syllabuses: notions, topics, settings seemed to promise new life for the word. A perusal of *Threshold Level English* (Van Ek and Alexander 1980) and the parallel *Threshold Level for Modern Language Learning in Schools* (Van Ek 1977) reveals, however, a predominant emphasis on structures, or syntactic formations, as exemplars (with a certain amount of concrete vocabulary to flesh these out), even though the presentation of the syntactic structures does not adhere to any traditional sequence. The same impression emerges from a close study of *Un niveau-seuil* (Coste et al. 1976). In the statements of purpose and procedure, the authors of the latter affirm their deliberate decision to elaborate the linguistic devices needed by learners in communicative exchanges in specific situations of use. "Un niveau-seuil," they state, "ne saurait satisfaire à tous les besoins sémantiques d'expression. Il ne permet pas de tout dire, mais simplement de communiquer adéquatement ... dans des situations simples de la vie courante" (Coste et al. 1976:36). For this they supply useful formulas like *je peux la faire, il s'est corrigé,* and *il bat sa femme.*

Some recent approaches to language learning and teaching do bring back an emphasis on vocabulary, notably Suggestopaedia (Racle 1979) and Natural Language Learning (Terrell 1977). This parallels the renewed interest in semantics in linguistic, sociolinguistic, and psycholinguistic theory. Attempts to program computers to understand and produce linguistic communications had led to a flurry of research on semantic memory, where meaning is stored in networks of relations between concepts, whence it may be retrieved in the form of words, as context and collocation require.

As early as 1966, Hymes had protested against the "Garden of Eden" view of much theoretical linguistics, with its overemphasis on the ideal, rather than the earthy reality of language use. "Human life," he said, "seems divided between grammatical competence, an ideal innately-derived sort of power, and performance, an exigency rather like the eating of the apple, thrusting the perfect speaker-hearer out into a fallen world. Of this world, where meanings may be won by the sweat of the brow, and communication achieved in labor ..., little is said. The controlling image is of an abstract, isolated individual, almost an unmotivated cognitive mechanism, not, except individually, a person in a social world" (Hymes in Brumfit and Johnson 1979:8). This abstract individual, it seems, has an innate *faculté de langage,* whose chief characteristic is a knowledge of the grammar of a possible language, which seems eventually to acquire an uninteresting surface structure of words, almost as an irrelevant distraction from the central preoccupation with what we might think of as "pure language".

Hymes's "person in a social world" needs to be able to communicate, even if not in "all and only grammatical sentences of the language". Studies of second-language acquisition by adults have shown how functional communication can take place through an ordered series of lexical elements – Zoila's "big words". Zoila, a 25 year-old Spanish native speaker, working as a housekeeper in English-speaking homes in the United States, manages to communicate fluently, for the satisfaction of her own communicative needs, without bothering too much about structural or morphological accuracy. "Zoila seems to focus her attention on those elements in speech which convey content. She ignores non-informative elements," we are told.

Her own description of her communicative method is instructive. "I never listen," she says, "you know the ... the words little, uh, small words for continue my conversation .... In the sentence I never using this little, little words [function words] .... I'm ... hear and put more attention the big words .... I know "house" is the *casa* for me" (Hatch 1978:246–55).

Of course, we would want our language learners to progress beyond the level of language control of Zoila. "A word fitly spoken is like apples of gold in pictures of silver," as the ancient sage expressed it (Proverbs 25.11). More prosaically, "an idea well-expressed is like a design of gold, set in silver" (*Good News Bible* 1976:717). Nevertheless, in her practical way, Zoila may be pointing out to us something that from our intellectual stratosphere we have been missing on the earth below. "A thought may be compared to a cloud shedding a shower of words," said Vygotsky (1962:150). Surely the time has come for us to pay attention to this "shower of words", and consider carefully how we can provide even our elementary learners, and much more so our advanced learners, with the means to "get across meaning," even before they can express discriminatingly fifteen ways to request that the door be opened.

To return to the "shower of words" metaphor, Vygotsky makes it clear that "thought does not have its automatic counterpart in words"; consequently, "the transition from thought to word leads through meaning" (Vygotsky 1962:150), and this muddies the waters. If we go back over theories of meaning in linguistics, philosophy, and psychology, we find a common notion underlying vastly different approaches, from Saussure to Quillian. For Saussure, "initially the concept is nothing, that is only a value determined by its relations with other similar values, and ... without them the signification would not exist" (Saussure 1959:117). In a strikingly parallel statement, the cognitive psychologists Collins and Quillian, who are struggling with the problems of programming computers to comprehend and converse with people, assert that, in the structure of memory, "a concept would be a set of relationships among other concepts .... An interesting aspect of such a network is that within the system there are no primitive ... terms ..., everything is defined in terms of everything else" (Collins and Quillian 1972:313–14). Saussure saw meaning as being defined by oppositions and contrasts, that is, by "everything that exists outside of it" (Saussure 1959:115). Wittgenstein's view of a concept, materialized in language in use, is the mirror image of Saussure's concept: it is "a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail": *ein kompliziertes Netz von Ähnlichkeiten, die einander übergreifen und kreuzen. Ähnlichkeiten im Grossen und Kleinen* (Wittgenstein 1960, quoted in Slobin 1979:152, 195). There is, then, diversity within the concept, as well as among concepts.

It is through words, for the most part, that concepts find expression in language use. Elusive as the full meaning of concepts is, conveying their meaning through words adds to the difficulty. The delimitation of the word fails to capture the elasticity of the concept. (When, for example, does a *stone* become a *boulder* or a *rock*, and when is it a *pebble?*) Words also straddle concepts, and they develop new meanings as they enter into different combinations and relationships. Words also play with meanings, as in metaphor and idiom. With the elusiveness of the concept paired with the unpredictable behavior of the word, it is small wonder that human beings fail to make themselves understood. The *mot juste* is indubitably an apple of gold, to be savored and treasured.

Halliday's term, "meaning potential", is well chosen as a description for language: this he defines as "sets of options, or alternatives in meaning, that are available to the speaker-hearer" (Halliday 1973:72). Halliday emphasizes what Malinowski has called "the dependence of the meaning of each word upon practical experience and of the structure of each utterance upon the momentary situation in which it is spoken" (Malinowski 1946:312). For Halliday, a semantic network is a hypothesis about patterns of meaning, with three facets: (1) it is a hypothesis about what the speaker can do, linguistically in a given context (that is, the meanings accessible to him); (2) it is an account of how social meanings (patterns of behavior) are expressed in language; and (3) it forms the bridge between behavior patterns and linguistic forms (Halliday 1973:76–83). This takes us beyond the interrelationships and options the more traditional network of concepts provides to the contextual features which impinge on the choices of the speaker. "Contextual" refers in this case to the inner as well as the outer context – not only to situational features, but linguistic and emotional factors as well, the latter often being strongly influenced by the attitudes and values of the speaker's cultural environment.

Clearly, Halliday's model provides food for thought for the language teacher. "Practical experience" and "patterns of behavior" vary from culture to culture, as well as from individual to individual within a culture. There is some commonality, of course, in the realities of human life everywhere. People eat, sleep, talk, or ride, whether in a jet plane or on an ox cart (yet, even here, the mode of "riding" may have varying connotations, and therefore different meanings, for the members of different cultures, implying to one status, to another weariness, and to yet others haste, necessity, or diversion). Bever's analysis of the knowledge basic to all concepts expressed through language is illuminating in this regard. He distinguishes four components which must be taken into account for full comprehension of utterances: *semantic meaning*, *cultural ideas* (of which *linguistic ideas* are a subset), and *personal ideas* (Bever 1972:101). Of linguistic ideas, Lyons observes that: "The meanings of words (their sense and denotation) are internal to the language to which they belong .... Each language has its own semantic structure, just as it has its own grammatical and phonological structure" (Lyons 1977:238). Each language selects and combines elements of meaning idiosyncratically, as do individual language users (who by temperament, personality, and their experiences of life may be culture-bound to a greater or lesser degree). This is what makes "choosing one's words" such a challenging yet satisfying activity, and the choices that are made so revealing that stacks of books crowd library shelves with attempts to explicate them. Henry James's declaration: "Summer afternoon – summer afternoon; to me these have always been the most beautiful words in the English language" is both individualistic and culture-specific.

In view of the complexity of "meaning potential" for communication, whether in the native or in a second or third language, it is unfortunate that the term "communicative language teaching" seems to have been preempted for a somewhat narrow view of basic needs in communication in a restricted set of situations. Johnson speaks of the need for "inventories specifying semantic and pragmatic categories which are arrived at by considering presumed communicative needs" of the students (Johnson 1979:193). He acknowledges the dilemma this creates for the language teacher who, faced with preselected, itemized content, is then expected to teach for the kind of global performance that comprehension and production of authentic language for unpredictable personal messages implies. This is not to say that there may not be a genuine need for a "systems approach" to language learning for certain groups with readily identifiable short-term needs. It does seem appropriate, however, to separate out special cases (language for specific purposes, a unit-credit system for adult migrants, or specialized training for certain occupations and professions) from language teaching in general worldwide. Each situation will require its own analysis of needs, and for many the predominant need will continue to be "language *for* communication" (that is, both comprehension and production), acquired through contact with authentic oral and written materials, and practiced in communication situations – foundational preaparation for later specialization when the need arises.

The kinds of materials a "communicative approach" to specific learner needs of a practical nature can generate for large groups of students, under publisher pressure for rapid and economical production, run the risk of presenting the learner with "hollow language", to use Robinson's term. As Robinson points out, "'Anything' a native speaker says will not always fulfill the goal of increasing a student's understanding and sensitivity toward people with different cultural values and behaviors." Even authentic language may be "hollow in a cultural sense, hollow in a personal sense, and hollow in a motivational sense" (Robinson 1981:28), even though propositions and illocutionary acts may be situationally and socially appropriate. "Language *for* communication," taught with explicit discussions of how language works to convey meaning, will prepare students to analyze their own meanings, in relation to the linguistic and cultural ideas of their native background, as they select from the options the new language provides. Explicit study of pervasive ideas and preconceptions will sensitize them to the inner meanings of the messages they are receiving, and enable them gradually to frame their own in culturally acceptable ways. For this, the various kinds of speech acts the "communicative approach" has brought to the fore (Widdowson 1979:118) are useful, we might say indispensable, but these again are a framework for rather than the essence of communication.

Widdowson makes the distinction between items selected for frequency of usage and those selected because "they have a high potential occurrence as instances of use of relevance to the learner's purposes in learning" (Widdowson 1978:13). Insofar as Widdowson approximates usage to Chomsky's competence and use to his concept of performance, items with a "high potential occurrence" are still in the domain of usage, or items to be learned and produced as a demonstration of existing competence. For them to become use, or performance, or *parole*, they must be used expressly to achieve the learner's purposes then and there. As items being practiced for future use, they are on a level with the widespread practice in *langue* or usage which they are intended to complement (if not replace). Time spent talking out what one is predicted to need at some future time is just as much practice as structural practice, situational practice, or practice in communicating. Motivated use where students talk about things they really want to talk about is not being tapped, as it must be if language is to be learned *for* actual communication, rather than *as* communication in the abstract. We may be getting closer to communicative competence, but we are still in the realm of demonstrations of acquired competence, rather than genuine performance. "Usage," says Widdowson, "... is that aspect (of performance) which makes evident the extent to which the language user demonstrates his knowledge of linguistic rules. Use is another aspect of performance: that which makes evident the extent to which the language user demonstrates his ability to use his knowledge of linguistic rules for effective communication" (Widdowson 1978:3). Demonstrating the ability to use, no matter how artfully the opportunities for demonstration are contrived (through role-playing or simulated situations, or whatever), is not use. The latter can occur only in episodes of effective communication – student originated and student sustained. Here the idiosyncratic and unpredictable will inevitably intervene, despite the best-laid schemes of materials developers and classroom teachers (Rivers 1976:7–8). This is genuine interaction. This discussion on language *as* communication and language *for* communication brings us back to our central topic of "words fitly spoken" (or written). We can use structures or illocutionary acts, but without an extensive vocabulary from which to select we can convert neither into comprehensible communication. As Zoila in her practical way realized, "book red table kitchen" is more readily comprehensible than "the × object is on the thingamajig in the you know where" (see examples R21, R23, in Rivers 1978). Furthermore, inventories of grammatical structures or of speech acts are finite, quite restricted, and therefore learnable. Vocabulary acquisition, on the other hand, continues throughout our lives, even for the native language: at times imperceptibly, at other periods more rapidly as we come into contact with a new area of study, a new professional milieu, or a new dialect or sociolect. Augmentation of vocabulary is the one area of language learning which does not seem to be slowed down by increasing age. It seems rather to become easier as one matures and one's knowledge of the world and the differentiations in the realm of thought broadens. Even in a foreign language, the first ten words are probably the most difficult one will have to learn. One's personal vocabulary is an individual achievement and possession, poor or rich though it may be.

What then are the psychological mechanisms which account for this extraordinary ability to expand one's means of expression? Recent psychological experimentation is filling in details of what Quillian has termed *semantic memory*. Tulving describes this construct as follows:

> "Semantic memory is the memory necessary for the use of language. It is a mental thesaurus, organized knowledge a person possesses about words and other verbal symbols, their meaning and referents, about relations among them, and about rules, formulas, and algorithms for the manipulation of these symbols, concepts, and relations. Semantic memory does not register perceptible properties of inputs, but rather cognitive referents of input signals. The semantic system permits the retrieval of information that was not directly stored in it, and retrieval of information from the system leaves its contents unchanged" (Tulving in Tulving and Donaldson 1972:386).

This area of research is still in a ferment of development, but we can draw interesting implications from those aspects of the model on which there is a reasonable consensus.

Semantic memory is viewed as a network in which conceptual nodes are linked by inferential relations which draw on the redundancies within concepts. (A series of inferences like "*dog:* animal with four legs: infer *can run:* infer *can be killed on roads:* infer *for safety keep on leash*" enables us to comprehend an utterance like "Her dog shouldn't be over there.") The concepts in semantic memory are independent of the forms of a specific language. Words of the language we are using become linked with interconnections of the network, and proceed to draw on the inferential relations already established for these (see also Rivers and Melvin 1977). Thus they are absorbed into the organizational structure. This is one of the most important aspects of the model. "Organization occurs in memory ... to permit inferences in storing and retrieving semantic information. It is by using inference that people can know much more than they can learn" (Collins and Quillian 1972:324). When we encounter words of a new language we can rarely match them in a one-to-one relationship to lexical items of our native language, and thus profit from the interconnections already formed (although many, unfortunately, try to do this). The new forms must be linked up with their own culture-specific inferences. We must also learn their limitations and expansions in relation to apparently similar meanings of lexical items already familiar to us (their differences in distribution, in collocations, and in syntactic requirements).

Since, as Jenkins puts it: "The mind remembers what the mind *does*, not what the world does" (jenkins 1973:170), these new connections can be established only through use in meaningful contexts. The fallacy for most learners is "looking for meaning as one would look for marbles: a meaning (being) considered as one thing among other things, a definite something located somewhere" (Morris 1960:44). As Hardwick points out, "Morris is stressing," as does Wittgenstein, "that the process of semiosis is not something that goes on 'in the mind,' but in the activities by means of which something is taken-into-account by individuals involved in group activity. 'Meaning' is a part of that activity; ... rooted in the forms of life" (Hardwick 1971:107). The meanings, both semantic and cultural, of the forms of a new language are, therefore, most readily and precisely learned in the milieu where the language is spoken. Failing this, we need to surround the learner with as much authentic speech, writing, kinesics, aspects of the cultural milieu, and contacts with speakers of the language who have been brought up in the target culture as possible. These supports are more readily available to second-language learners, although social and psychological distance may impede the students' profiting from them as they might (Schumann 1976:135–43; 1978:69–100). In a foreign-language situation, taped and videotaped material, films, songs, contacts with native speakers, and visits to areas where the language is spoken are essential, if the outward forms of the language are to be infused with authentic meanings and inferences.

Acquisition, storage, recognition, recall, and retrieval are our next concerns. These we can deal with only summarily in this paper. Basic to effective operation of these functions is organization. Memory is structured. Input must be coded according to some organizational scheme, or memory would become overloaded and recognition and recall would become well-nigh impossible. What we actually store is dependent on attention and motivation, which are reflections of our purposes in relation to the material impinging on our perceptual system. We take in, code, and store what we see as being relevant to our goals. How we organize it for storage is frequently idiosyncratic, but the more we can "chunk" items of information into what we see as categories and natural groups, the more we can retain (Miller 1956). Students have very personal semantic networks into which they process what they perceive to be useful. Consequently, vocabulary cannot be taught. It can be presented, explained, included in all kinds of activities, and experienced in all manner of associations (visual, auditory, kinesthetic, tactile, olfactory if one wishes), but ultimately it is learned by the individual. As language teachers, we must arouse interest in words and a certain excitement in personal development in this area (that is, motivation to learn ways of expressing meanings that are important to the individual student, even if not to others in the group). We can help our students by giving them ideas on how to learn, but each will finally learn a very personal selection of items, organized into relationships in an individual way. This individuality should be encouraged, since it is a well attested fact that idiosyncratic organization in memory results in more efficient recall. (For practical suggestions on ways of helping students learn how to learn vocabulary, see Rivers 1981:464–67.)

It is generally held that we do not store surface forms of language intact. Through inductive processes, we extract the sense and store meaning. We also store phonetic features for reconstruction of lexical items as needed. In attempting to retrieve words, we often dredge up items with phonetically similar features, particularly initial and final segments, stress patterns, and number of syllables. For instance, we may produce *extraneous* for *extenuating*, or, in searching for a name, we may go through a series like *Mulligan ... Houlihan ... hooligan ... Goolagong*. This has been called the "tip of the tongue" phenomenon (Brown 1970:274–301). Similarly, we tend to store conceptual attributes associated with lexical items, rather than "the meaning" of a word. It is because of the redundancy of such attributes in each lexical item that so many inferential cross-associations can be made. Concepts are grouped according to such relations as superset (or superordinate), similarity, part, proximity, consequence, precedence, and parent (Collins and Quillian 1972:324). Consequently, vocabulary-oriented activities which move from whole to part, agent or object to function, or from superset to subset; those which bring out similarities and differences, or which show relationships among groups of words or parts of words (compounding, dividing off prefixes and suffixes, and constructing new meanings with different arrangements of segments); free associations and collocation practice; chaining words in syntagmas; cloze exercises; word puzzles and word games; all of these techniques help to establish relations among items of the new language which facilitate recall and retrieval, while providing for that rehearsal of material which is so essential if it is to be stored in longterm memory. (See also Rivers 1981:469–70.)

Recognition and recall (which is basic to retrieval) are different processes. Kintsch calls recognition pattern matching and recall pattern completion, which he considers to be "one of the most important human information processing operations" (Kintsch 1972:302). We can recognize much more than we can retrieve; in other words, we know much more than we can actively recall. The great amount of material we can match facilitates listening and reading. Recall and retrieval are, of course, necessary for production. The more associations and interconnections we have developed, the more efficiently we can recall and retrieve. Since we are in control of production processes we can paraphrase, circumlocute, and avoid when we cannot retrieve the words for which we are searching. In listening and reading, however, the selection is not ours. It is fortunate indeed that pattern matching is less demanding than pattern completion. Because of this difference between recognition and recall, we must not require students to be able to use actively all the vocabulary they encounter. They must be encouraged to develop as broad and far-reaching a recognition vocabulary as they can, in areas of special interest to them, while settling for less in production vocabulary. (For techniques for augmenting aural recognition vocabulary, see chapter 3, Rivers 1975, 1978.)

Lest this detailed discussion should distract us from the unity of language performance in context, we cannot do better than reaffirm, in conclusion, that words are but surface manifestations of meanings which are personal and communicable. As Jenkins puts it: "Recall is not just a function of what the outside world presents to you but also . . . a function of what you do with the events as you experience them" (Jenkins 1973: 163). Potential meanings are provided by a new language, but these are realized by motivated individuals. Teaching a new language is not just providing opportunities for acquisition of forms, but encouraging active communication of ideas and expression of individuality through those new forms. Ben Jonson once said: "Neither can his mind be thought in tune, whose words do jarre; nor his reason in frame, whose sentence is preposterous." We can serve our students best by helping them to use effectively well-chosen words which can express subtleties and to understand the messages of others in an intercultural context. "A word," as Vygotsky so perceptively observed, "is a microcosm of human consciousness" (Vygotsky 1962:153).

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# TRANSLATION, INTERPRETING AND TEXT LINGUISTICS

I think it suits a world congress of applied linguistics well to focus on a critical assessment of how new and important insights of linguistic and related research can be successfully applied to improve communication, i.e. both communication skills and the teaching of them.

It is true there are communicative processes which go on in a more or less unfettered and natural way whatever linguists may have to say about them. But they too, as has become clear with regard to our "quasi-innate" skill in our mother tongue, can profit considerably from a growing commitment of linguistic and other social sciences towards the improvement of educational facilities for the speaker and listener, writer and reader.There are, in addition, many other communicative processes which are by no means to the same extent natural – foreign language skills, of course, ranging foremost among them. Another, in a way highly unnatural but, to be sure, extremely useful and increasingly important type of communicative skill which is urgently in need of linguistic enlightenment, is the transfer of messages from one language into another.

I refer, of course, to 'language mediation', as I should like to call what translating and interpreting and their varied border and subdisciplines have in common. They are perhaps as old as the division of mankind into differently speaking groups. But never has bilingual language mediation been so breathtakingly in the frontline of verbal interaction as it is today. The label 'age of translation' is perhaps a misnomer as are all such trendy tags. But whatever one should single out as the dominant character or complex of features of our time, language mediation, i.e. translating and interpreting, helps to express it and to make it pervasive all over the world. With the rapid proliferation of information facilities the transfer of messages into other languages is being carried out in innumerable variations. It ranges from simultaneous interpreting being a very direct attempt to substitute what is being said in one language by a quasi simultaneous rendering of the information content in another language "down" or "up" to a well-thought-out literary translation being the product of weeks of careful recreation of the artistic form and content of a play, novel or poem. In between these two poles we have a vast sliding scale of 'mediation products', either written or spoken, which all share the decisive property of being a target language version of a source language stimulus. Whatever variety of language mediation may be involved it is a result of a communicatively 'abnormal' situation. 'Normally' we communicate via original texts. Senders produce texts and recipients receive them. It's a direct give and take. Interpreting and translating, however, as we all know, live from the illusion of directness. They can be compared, as a wise man or woman once remarked, to a kiss through a veil. The product of language mediation is never the result of direct experience put into language. It is always a secondary product or more precisely it is a *text-induced text*. It derives its existence *entirely* from already verbalized communictive events. Its uniqueness as communicative behaviour is quite different from seemingly similar types of social interaction by means of language such as turn-taking in conversation or exchange of written messages where texts are reactions to previous texts and so on. Although elicited by previous verbal sequences they, viz. turn-taking etc., are objectivizations of something previously non-verbalized. They stand for themselves. In non-mediative discourse, i.e. in normal discourse apart from translation or interpreting, the subject matter to be studied by the linguistic analyst and the applied linguist who wants to improve or teach the activities involved may be highly complex, but it has a clear-out unique mode of existence. Language mediation, however, always has a shared existence. Whereas "normal" communication can be represented by a triadic model of source – message – recipient, translation-mediated communication requires at least quadruple representation: source – source text – target text – recipient. More exactly we should need a quintuple model with the mediator in between who poses both as recipient and source.

The fundamental problem of bilingual language mediation, then, is how to achieve a target text which can serve as an adequate replica of the source text, or more precisely, how to enable a target language comprehender to retrieve the same information as that of a source language comprehender. In a nutshell, target texts stand for everything which has gone into the source text. Translating and interpreting should be comprehended as if they were "normal" stretches of discourse. Readers and listeners in the target languages should decode them as if they were natural encodings of experience. The target texts should activate the unhampered flow of information from text to understander (Neubert 1968, 1970, 1973; Dressler 1974; Reiss 1976; Wilss 1977).

Now you will wonder whether I am not drawing too rosy a picture. Can language mediation really achieve this? Is a translation not always a translation, and does not interpreting always suffer from many shortcomings? Of course, the actual state of affairs, or should I say the state of the art, is far from the ideal state where the products of language mediation are perfect replicas of source language material. But my point is rather: why is language mediation still so often deficient? What hampers the flow of information, in the widest sense of the word information, including the whole complex of semantic/pragmatic features as well as the aura of rhetorical and stilistic options? In a very direct and obvious sense the reason why language mediation does not – or should I say cannot – achieve its full aim, i.e. the aim of the source text, is because it *is not* the source text. It is *textually* different. It is a different text. It is couched in a different world of discourse. But what that means precisely begs the question. We shall have to look for an answer to our question as to why do translations lose so much of their original impact. My thesis runs as follows. An original, i.e. the source text, is syntactically, lexically, and stylistically as well as contextually rooted in the communicative matrix of the source language community. It is structured and functionally efficient with regard to the communicative needs in typical communication situations. Its linguistic layout corresponds to the source speaker or reader's pattern expectation.

What this actually amounts to is exactly the subject matter of text linguistics or discourse studies. As a first approximation I will say that this relatively new linguistic discipline explores the subtle relationships between cognition and discourse. Linguistic competence, which had so far been the professed topic of the linguist's analysis, has turned out to be more than grammatical competence, the ability to produce grammatically correct sentences. It includes what has come to be called communcative competence, comprising the speaker/writer's ability to plan and implement much larger stretches of discourse. This widening of the linguistic horizon coincided with and was in fact essentially caused by a discovery, or rather two important discoveries. First, it has become clear that many properties of the sentence, morphological and syntactical as well as, in particular, semantic and pragmatic, can only be fully explained by taking into account what occurred before and after the sentence under consideration. Secondly, and perhaps more significantly, sentence sequences display structural and functional characteristics of their own which are just as properly linguistic as those below sentence boundaries (Graustein and Neubert 1979). It is true, the structures discovered beyond the individual sentence are of a highly complex nature. They tend to overtax the linguist, forcing him to look out for explanatory assistance from adjacent disciplines. In such a situation, it is more than a lucky coincidence that specialists from such fields as sociology, psychology, and artificial intelligence appear to have started to look in the same direction (Beaugrande 1980; Schank and Abelson 1977; Kintsch 1977; Bobrow and Collins 1975). They have become increasingly interested in text and discourse because they are discovering, in our semantically coherent sequences of language use, the significant traces of our way of apprehending the world and dealing with whatever problem we have to face in objective and subjective reality. Texts are seen as explicit models of the world and our ways of coping with it. Whereas sentences may be interesting objects in themselves, texts transcend sentences as *forms* of thinking and therefore limited objects of inquiry. They obviously represent both formal and content structures functioning as diagnostic corollaries as well as indispensable components of our social existence.

Translating texts, then, is equivalent to transplanting an "organ" from a whole "body of texts" into another "body of texts". If we stick for a moment to the comparison between language mediation and organ transplantation, we arrive at the crucial notion of incompatibility. What I have called, a minute ago, the lack of original impact of a target text compared to its original turns out to be the incompatibility of a translation in relation to the textual naturalness of all real and possible sets of texts in the target language.

The question remains how we can measure this intuitive impression. Following the insights of texts linguistics so far arrived at – and there is by no means a consensus of opinion, let alone a systematic display of results – we should have to focus attention on just those supra-sentential *macrostructures* (van Dijk 1977, 1981) that are responsible for "textness" – in addition to grammaticalness – in a particular language. Since this property of being the expected token of a type of text which has an interpretatble function in a class of communicative situations is much more than an accidental phenomenon of a particular stretch of discourse, the important thing to find out is the typical generality or rather its grammatico-lexical implementation. What we in fact need is a comprehensive survey of discourse types and their grammatical and lexical repertoirs or distributions in the source language and in the target language. But, and here lies the serious difficulty in arriving at such contrastive textual strategies for two different languages, those macrostructural textual profiles are not to be identified just with the surface arrangement of words and phrases. It is true, textual surfaces make us aware of particular options to put texts together differently from language to language. There is, however, considerable leeway as to how individual texts may be structured along the scale of one particular text type. There is, in other words, no one-to-one relationship between text-class and more specifically macrostructures establishing a particular text-class and the concrete formulations of one text token (to be translated). This asymmetric relationship, so to say, stands in the way between the awareness of a textual norm and the attempt to put it into actual grammatical and lexical practice. There is always diversification from a certain macrostructural level to the level of morphosyntactic and lexemic structures and units. This variability extends over a certain band width, but it does not normally go beyond it. To a certain extent macrostructures show quantitative dominances, i.e. certain words or constructions occur more often than in other contexts which makes the clear-cut delineation of the linguistic setup of certain textual macrostructures even harder. This optional character of textual norms is nevertheless strongly felt as a limited range of potentialities both by the producer and the understander of a concrete text. The psychological fact of macrostructure is evidently rooted in the social experience of communicators in a particular language. Speakers and writers are under the impression of complying with communicative conventions although they are actually never expressing themselves in absolutely the same way. It is evidently their shared communicative experience which works as a continual corrective against potential noise development in the once selected communicative channel. This experience has its empirical base in the exposure of speakers of a particular language, source or target, to particular environments of discourse patterns. As well as being a member of a particular speech community with its more and less significant subdivisions a producer (and recipient) of a text lives and acts in a correspondingly language-significant world of communicative situations. They, in turn, are internalized as paradigmatic options, a kind of vast, but structured textual potential reinforcing the activation of a concrete textual choice and/or distinguishing this chosen text token from other possible or impossible choices. The source text to be translated or interpreted is thus simultaneously embedded in and differentiated from what can be called *background texts*. Background text thus represent both similarities and contrasts. They are an objective reality of the text users' previous experience. But they are also, which is perhaps even more important in our context of language mediation, a psychological reality. Text tokens are actively experienced as sharing typical textual features; in short, they belong to discourse types. We are perhaps not intensely aware of their formal implementation because we concentrate on what and less on how something is said or written. But nevertheless there is a continual monitoring of the adequateness of surface phenomena guaranteeing a certain communicative intention. Background texts thus stand in paradigmatic relation to a particular (source) text. One text shares a textual paradigm. It is produced and understood in terms of this larger paradigm of discourse.

Time and space forbids me to attempt a survey of possible discourse types. Text linguists of different denominations have been trying with varying success to set up consistent text typologies covering the totality of discoursive activities in a speech community, so to say the various discourse paradigms (Dressler 1972; Gülich and Raible 1972; Daneš and Viehweger 1974; Petöfi 1979). In a way, these brave attempts can be compared with the endeavours of componential analists to devise an ordered system of semantic markers or features functioning as a sort of universal semantic alphabet.

This semantic analogy leads me on to another, perhaps even more remarkable parallel. Just as we can think of bundles of semantic features showing different distributions from language to language, so discourse types show language-specific variations of a highly complex kind. In other words, the target text relates – or rather is automatically related by the target language comprehender – to the patterned totality of background texts in the target language community, the target textual paradigms. It is here, as I suggested before, that the notion that the translation is incompatible with its new target language background is acutely perceived. More precisely, the translation is confronted with what has been called a *parallel text*. This is the instance of a type of discourse that readers and listeners of the target language are used to expect under identical or similar communicative conditions. Parallel texts have in fact nothing directly to do with translations. They are the conventional or natural products arising from normal verbal interaction in a target language setting.

The British Highway Code has as its parallel text in France *la code de la route* and in German the *Straßenverkehrsordung*, to give a very simple example which could be multiplied ad libitum. Parallel texts, then, form that group of background texts with which translations strive in vain to compete.

A close contrastive study of source texts, target texts, and parallel texts in the target language yields most telling results. They have, however, to be interpreted very carefully, because the equivalences between source texts, on the one hand, and translations and parallel texts, on the other, are far from straightforward and direct, and in particular they are not of a static kind. There is rather a subtle dynamism governing the relationships between the three kinds of texts. Translations that claim to be target versions of source texts nevertheless suffer – or should I say profit – from structural carry-over from parallel texts. This carry-over may be unconscious on the side of the translator. It may be quite intentional, on other occasions. The decisive point to be considered as the criterion will, of course, be the purpose of the translation. There is perhaps a scale ranging from translation least, or not at all, affected by target language parallel texts to a target version merging almost imperceptibly into a target parallel text. The latter pole is easiest to describe. The majority of practical and/or commercial translations such as instruction manuals, all sorts of notices and labels, and in particular advertisements, material for publicity purposes, anything meant to appeal directly to the target reader, will always be on the verge of becoming true-blooded target texts. Here I should also include a very large quantity of interpreted texts. So-called bilateral, sometimes also termed liaison, interpreting and, to some extent, consecutive interpreting feed heavily, sometimes exclusively, on the communicative conventions of the target language. What makes interpreting especially prone to simulate parallel texts is, no doubt, the emphasis placed on message content and the unavoidable loss of formal source language features due to incomplete memorization. Remembered, i.e. relevant, semantic items become so to say recast in matching target language expressions. In bilateral interpreting, where the mediator bridges the gulf between two parties conversing in two different languages, the results of his or her efforts are not only, as a rule, shorter versions of the two (or more) interlocutors' speech acts. They are rather condensed parallel texts with the respective source language speakers' names or pronominalization attached in brackets. With the exeption of simultaneous interpreting, it is perhaps that interpreting altogether thrives best by freeing itself from surface constraints, i.e. constraints imposed by the surface structure of the source text. It has often been said, therefore, that interpreting tries to catch the *sense* of what has been said and cannot endeavour to recapture the full-fledged systematic meanings of the source language. In our context of language mediation in the light of text linguistics, however, interpreting is but a special case of the general text-bound nature of information transfer from source to target language.

Here is the place to introduce another well-known distinction and to try to assign it its proper slot in an overall theory of bilingual textual mediation. Most translation theorists exclude it from their consideration because they believe it to be of a subjective rather than an objective nature. But from a textual point of view there is more to it than idiosyncratic accident whether we translate or interpret into our mother tongue or whether we perform into a foreign language. (I leave aside the question of bilinguals, although I do not think it invalidates our point in principles.) It goes without saying that our communicative, i.e. textual, competence operates quite differently in what some call "active" as against "passive" translation or interpretation, "active" means into the foreign language, "passive" into one's mother tongue. It is true, from the angle of both sender and receiver of the source or target texts respectively, the mediator's first language is essentially unimportant. But the actual product betrays this directionality quite distinctly.

So-called active translation and interpreting has to grapple much more with target language textual conventions. It is here that the translator or interpreter takes his bearing quite consciously by taking parallel and background texts of the target language into account. In passive translation the *Sprachgefühl* of the translator, or more specifically his textual competence in his mother tongue, seems to rule out any obvious deviations from target language textual conventions. However, there is still the risk that the translator is not sufficiently aware of or, rather not experienced enough in all those domains which are normally outside his or her active communicative competence, such as fields of scientific or official discourse.

Time and again we are confronted with the possibility caused by various factors that the target text runs on a different track from that of the normally expected train of target texts. Having described this state of affairs experienced by both experienced and inexperienced translators and interpreters as a consequence of the gradient between the system of text types in the source and the target languages, I am now in a better position to suggest an approach that might help to solve some of the theoretical and, above all, practical problems arising from the need to achieve a more adequate language mediation. What I am going to propose, or rather sketch as a modest proposal, could be of some help both as insight and tool. Insight in the sense that an analysis of the textual structure of translated and/or interpreted stretches of discourse supplies information about text production and comprehension in general. Tool in the sense that the treatment of the translation process and its results as intertextual strategy can serve to improve language mediation itself and, above all (and that is, incidentally my daily job), to make the teaching of translation and interpreting more effective. In fact, I believe that an awareness of the text as a unit of translation will shed light on the nature of the source text as well as on any attempt to "process it for target language consumption". Thus language mediation produces a kind of contrast medium which can sometimes tell us more about the original than a reader of or a listener to the original text is consciously aware of. Of course, this does not primarily refer to the content or relevant information value of the original text. It applies rather to the taken-for-granted textual arrangement, the *Vertextung*, as it is aptly called in German. Language mediation has to cope with difficulties with precisely those structural features where source texts excel in source language significance. This is certainly not news to the contrastive linguist who builds up his language confrontation from a systematization in just those areas of interference. Similarly, a good ideal of negative transfer in terms of contrastive language systems finds its way into language mediation. This has always been recognized in translation studies and translation teaching. But that is not my main point here. What I have been trying to stress is the textual contrast beyond the grammatico-lexical systems. It is what may be termed contrastive text linguistics. In the light of textual contrasts and, of course, also equivalences, all systemic diversifications are reordered and placed along a hierarchical scale.

In translating and interpreting, then, we are carrying out a continual decision process which proceeds as a sequence or rather sequences of options along segments of texts which can be identified as so-called units of translation. These all-important units stand in a very characteristic functional relationship to the textual superstructure. They are derived from it in terms of its projection into the target superstructure. Solving the problems of bilingual mediation, then, comes down to isolating just those subtextual units which can serve as starting blocks for a successful carry-over of discrete, or rather relatively discrete, items of information. Those units are certainly larger than words and phrases. They may coincide with sentences, but very often they transcend sentence boundaries. It is exactly at this point where the macrostructures discussed earlier fall into place in the process of translating or interpreting. Failure to identify macrostructures as units of translation produces inadequate target text. Inadequate here means texts which may look and sound like perfectly correct sequences of target words and sentences. There need not be one grammatical mistake. But they are somehow "out of the target language text world". An interesting example of one particular and very important type of language mediation where macrostructures are particularly difficult to locate is simultaneous or conference interpreting. The interpreter in his booth has to react more or less immediately to the string of sentences he hears in his earphones. He has identified, it is true, the *superstructure* (van Dijk 1981), a scientific paper, a political speech, an intervention, at a scientific congress, at a demonstration, in a resolution, or what not. Furthermore he has a certain world plus subject knowledge in the field he is engaged to interpret in. In addition he has experience in the textual arrangement of the subject matter in the two languages, i.e. he is aware of grammatico-lexical divergences between the source and target languages of the same textual type. Lectures are more formal in German than in English, for example. But the pressure of time and attention splitting between heard and "simultaneously" spoken passages makes it almost impossible to safely identify subtextual chunks of discourse. Certain divisions have to be guessed and predicted in the minimum time lag between source sequence and equivalent target wording. Predictions of this kind already apply to grammatical, i.e. subsentential structures. It goes without saying that textual considerations are very hard to put through. The inevitable result is a target text that is textually far removed from a parallel target text. It seeks to get the basic (sentential) items of information across without bothering too much about an adequate target textual arrangement.

The discussion of the adequate and realistic *unit of translation*, as has just been demonstrated in the case of simultaneous interpreting, has to take into account the communicative conditions under which the mediation takes place. In other words, the units of translation vary according to the communicative situation. In order to avoid the risk of subjectivity in this respect, I have to stress what has to remain *invariant* while some elements become variables. The question of invariance is of course of paramount importance both for the theory and practice of translating and interpreting. It is the basis for teaching as well as for the professional job.

Invariance may be defined at various levels. First, it is a property of superstructures. A lecture must remain a lecture, as must a report, a memo, an instruction, a textbook, a manual, or – to take another class of textual types – a law, a contract, a public notice, a patent, or an advertisement, a leaflet, etc. Mediation should never result in mixing up discourse types. Secondly, and much harder to pin down, we have invariance on the macrostructural level. Here, we can be up against a clash between semantic and pragmatic meaning. In the source text a couple of sentences may constitute a macrostructure. In terms of meaning this is aquivalent to a macroproposition representing an ordered configuration – not necessarily sequence – of propositions contained in the series of sentential expressions. Translating and, particularly, interpreting can involve semantic reorderings as well as condensations and expansions caused by either gaps or extra distinctions of the target system or – and this is more important here – by deletions and additions caused by different textual conventions. In order to be pragmatically equivalent to the source macrostructure the resultant target macrostructure sacrifices a number of semantic values which – to put it bluntly – would not "make sense" to the target audience.

The big problem, however, is to locate and explain the reorderings and changes in the textual structure of the source. Here again, translation studies draw heavily on what text linguistics has discovered about how propositions are internally structured and how they combine to form macropropositions. I should like to mention only a few of the more dominant and, therefore, widely studied problem areas. Both within complex and between independent sentences we can distinguish semantic relation types. They activate logico-semantic relations between states of affairs (Graustein 1977; Graustein and Thiele 1977; Graustein and Thiele 1979). Another ordering is by local and/or temporal arrangement. Further specification is supplied by the modal characterization within simple and macropropositions. Of equal importance is the illocutionary classification of speech acts within stretches of discourse. Last but not least, I should mention the perhaps most significant contribution to the textual perspective that springs from the theme/rheme or topic/comment progression (Viehweger 1978; Motsch and Viehweger 1981). Whereas the textlinguistic pointers to discourse structure mentioned so far are mostly grammatical, so to say text-grammatical devices, there is, furthermore, a vast area of far less investigated domains of lexical coherence (Neubert 1979). There is no doubt that the interplay of lexical items in a text ranging from repetition to elaborate "word systems" (Aphek and Tobin 1981) plays an enormous role in the constitution of discourse structure and thus leaves its imprint on the textual profile to be translated adequately.

My main line of argument has been an attempt to theorize about what generations of language mediators have experienced and what teachers of translations and interpreting have come to accept as their guidelines. I liken the task of producing an adequate target text matching the textual paradigm of the target language to a filtering process that lets only those linguistic data through that qualify as constituents of a target text world. Language mediation, then, by definition mediates between texts and not between source and target systems, as had been supposed in earlier theories of translation. The text linguistic lesson to be learned by translation theorists is the feasibility of textual compatibility as against the incompatibility of source and target language systems. This argument is in line with the age-old experience that, unlike texts, words and structures are untranslatable. Texts and, in particular, target texts acquire this quality of adequateness as a result of the communicative needs of the target comprehender who literally *wants* what is encoded in the source text. And he wants it, i.e. the semantic-pragmatic context, as a socially and individually necessary part of his communicative world of discourse. Mediated texts, then, become part and parcel of his linguistic environment.

In a way, language mediation works like shunting trains. The information of the source text, in fact the whole source text, is shunted on to a new track. It reaches its new destination, the target audience, only after the relevant semantic content has been rearranged through the 'switch-board' of the target language textual system. This involves a complex analysis of linguistic items of the source text in the light of their transfer potential into the text type of the target language. The basic role of the translation which springs from textual requirements of communiction applies to simple sentence texts such as *No smoking* rendered into *Ne fumez pas* and *Rauchen verboten* or *Nichtraucher*, as well as to most elaborate literary works such as James Joyce's *Ulysses*.

Assessment of the textual directedness and orientation, however, has nothing to do with the subjectivity of the mediator. The very term "mediator" means the opposite of prejudiced prominence. "Mediation" means keeping a balance, bringing the two sides involved together, making the one who stands at a distance understand the other. The mediator brings about agreement, not in the sense of reaching affirmation, but rather – as in the phrase "we agree to disagree" – agreement as to a common frame of reference from which to start. Language mediation prepares the ground for understandability which need not be the same as understanding, let alone consensus. It clears out of the way what hampers communication. The metaphors so far used in my attempt to illustrate our problem, viz. filtering and shunting, were rather meant to elucidate the decisive point that the translation and interpreting process should never add any unwarranted ingredients. It's true, certain things may get lost. That is why filtering is quite an apt term. But what is more important is the reshaping quality of the mediation process. In fact, the most telling interface between textlinguistics and translation studies is the *reconstruction* aspect. A target text represents the reconstruction of a source text under the communicative conditions of another language community. Text linguists can treat translations as a kind of test case. Confronted with the need to be translated, the source text takes on a new face. Textual features come to light which had been overlooked as self-evident in the source language universe of discourse. What turn out to be the main stumbling blocks for the mediator in his attempt to adjust them to the target receiver becomes a "blessing in disguise" for the analyst of the source text who keeps his eyes open to recognize distinctions he had no idea of looking for in the first place. The translated text duplicates the original under controlled conditions, bringing out as a most suitable side-effect, a fresh and novel picture of the original. At least some hidden aspects of textual structure are brought into focus in a way which would have gone largely unnoticed in monolingual communication.

In a following example, a short news item, the verbal phrase of the second sentence can only be fully interpreted with regard to the preceding sentence.

> Last night the minister declared that the rumours about his resignation were totally unfounded. He was speaking at a dinner given by the Lord Mayor on the occasion of . . .

> Gestern abend erklärte der Minister, daß die Gerüchte über seinen Rücktritt jeder Grundlage entbehrten. Er machte diese Äußerung während eines Essens, das der Oberbürgermeister aus Anlaß . . . gab.

The reference *diese (Äußerung)* to the rheme of the first sentence expressed in English by an expanded verbal phrase *was speaking* stresses the contextual how of a previous what. The translation thus makes lexically transparent what, in the source, had been grammatically coded by the contrast between simple and expanded form.

Source and target texts are in effect variable expressions of one semantic whole, of one cognitive totality patterned in two different languages. Here, I touch again upon the subject matter of what I earlier called contrastive text linguistics. But I am not dealing with arbitrarily chosen textual types to be contrasted. Translation studies are specifically located on a borderline. At the beginning of my talk I mentioned, perhaps somewhat surprisingly, the "unnaturalness" of language mediation – unnatural in that it is not part of the "normal" performance of a competent speaker or writer of a language. This unnaturalness turns out to be a very significant transformation of communicative events. Let us for a moment forget the concrete purposes and hence pragmatic embeddedness of particular translations and interpretations. Language mediation, having to do with a source text and as many target texts as there are prospective target languages, demonstrates a general – or should I say universal – human potential to generate textual variants. Or, seen from another angle, the historically and communicatively conditioned variability of mediated texts reflects the semantic-pragmatic potential of mankind. This potential is closely related to the fact that human beings share an experiential world and perhaps also universal processing strategies (Beaugrande 1980:291). In fact, this state of affairs, which some call a hypothesis and others an illusion, is the very basis of translatability. And I think it is a solid basis, verified by the impressive history of translation and interpreting. It need not be subject to doubt but calls for a rational explanation. And it is precisely the explanatory power of contrastive textual analysis which lends conviction to a realistic view of language mediation and, more important perhaps, which helps to improve its quality where it needs improvement when it falls short of achieving textual equivalence.

A theory of language mediation explicates how one textual whole is related to an n-tuple of equivalent target texts – in simple terms, how target texts multiply the linguistic how of a source text. All target textual structures are projections of source text structures, but not in a one-to-one way. Textual equivalence is achieved through precisely those textual elements which play the same role in the target text that receivers experience as the "respective" ones in the source language. It is quite evident that I am not referring to grammatical structures or lexical meanings here. As already indicated, there cannot be any equivalences between these surface items. Translation equivalence does not rely on surface structure equivalence. It is receiver-based. "Receiver" here in the double sense of receivers in the target *and* source language. To demand from language mediation to capture

141

everything the sender has put into a text is unfair, for how could I say that the source receiver always grasps the totality of the sender's intentions?

The social reality of translation and interpreting is a triumph of *intertextuality*. The analysis of the pressing problems of language mediation from the point of view of text linguistics leads us, as I have tried to point out, unavoidably to the conclusion that the key notion of translatability is in fact synonymous with intertextuality. Language mediation, although always performed between two concrete languages, invites us to think in terms of natural languages functioning as variable means of a universal human semiotic system. This system is in principle accessible to all human beings. But – and this is the upshot of my talk – access is by way of equivalent texts. Intertextuality obtaining between equivalent texts of different languages makes it possible for speakers of different languages to, so to say, "tune in", to share experience coded in source and target languages. And the mediator guarantees this tuning in of his audience by reconstructing the kind of text that corresponds most closely to the communicative situation, i.e. he interprets or translates in a receiver-based way (Beaugrande 1980: 292).

Training in translation and interpreting, then, is training in awareness of intertextuality. Incidentally, this explains why one of the most effective training methods for students and practitioners of language mediation consists in textually-conscious reading and listening, particularly of course in the target language, if it happens to be a foreign language. But, what is sometimes underestimated, training in awareness of textual conventions in one's native language is just as helpful to achieve an advanced sense of intertextuality.

What I call intertextuality cannot simply be reduced to a network of interdependent textual rules govering the adequate production of equivalent discourse types in different languages. It is rather a phenomenon that a communicatively equivalent translation or interpretation shares with its source, although we are not (yet) in a position to pin it down, in all details, to straightforward grammatical-lexical-stylistic equivalence relations. It clearly has something to do with the unlimited human capacity to work out the ways and means of getting to know reality. New texts supply new models of reality, new ways of looking at and interpreting the world around us as well as within ourselves. Text linguistics attempts to demonstrate how we proceed to produce and understand verbal programmes of mastering those cognitive processes. Studies of translation and interpreting focussing on the features of intertextuality of mediated texts are in a position to point out how we can successfully expand the scope or domain of worlds by eliminating the barriers between languages. The text-linguistic perspective of language mediation, then, opens the way to a better understanding of how this cross-cultural transition can be implemented. It will allow a deeper insight into the processes of translation and interpreting as unique communicative activities of ever growing practical importance as well as into the linguistic and communicative status of mediated texts as realizations of particular textual sets among all possible texts.

Finally, I should like to make a point that relates to a more general matter worth discussing at a congress of applied linguists who sometimes ask themselves – in view of the proliferation of "applied topics" – whether they are still linguists at all. I think that what I have called the text-linguistic orientation of translation studies may well cause them to become more consistently and convincingly integrated in the overall field of lingustics. Their terminology will be sharpened and much of what has hitherto been regarded as pure intuition or art can be reinterpreted in terms of natural intertextual relationships. Subjectivity becomes gradually transformed into objective features obtaining between cross-culturally related texts. I don't want to exaggerate, but rather stress, a general tendency caused by the careful linguistic, text-linguistic analysis of the, to a certain extent, predictable changes between source and target texts under the impact of target language textual conventions.

At the same time such an approach to language mediation no doubt propagates a more comprehensive and socially realistic view of the scope and subject matter of linguistics in general. This tendency is symptomatic of how a so-called applied discipline can transform its "mother discipline", as a result of internal developments, as well as in reaction to the social need to improve the quality of translation and interpreting, by providing more reliable criteria for its effective description and teaching. Taking textual constraints into account as fundamental pointers to mediation adequacy may eventually be a decisive step towards making machine-aided translation programmes more realistic and putting text-type specific MT projects into practice.

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# CONTRASTIVE PROSODY: A MODEL AND ITS APPLICATION

What I would like to do here is to show how an intonation model, originally developed for Swedish dialects, can be used to generate prosody in different languages.[1] The most important feature of this model is that it generates durational patterns and pitch contours from an input phrase which has been provided with grammatical and pragmatic information.

The use of the same generative scheme for different languages gives us a good base for comparison and description of prosodic similarities and dissimilarities. I will also demonstrate how the model can be used to make precise statements about prosodic transfer in a foreign accent. As a by-product we get suggestions for the teaching of pronunciation.

In the last part of my paper I will give some examples of ongoing experimentation with synthesis and testing, which aim at clarifying the importance of prosody for acceptability and intelligibility.

I shall apply the model to three languages which are being studied both separately and contrastively in our department: Swedish, Greek and French. I also rely on work done in the project 'Optimal teaching of Swedish pronunciation', in which prosodic transfer was one of the main themes.[2]

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[1] The original model developed in collaboration with Per Lindblad (Gårding & Lindblad 1973) and Gösta Bruce (Bruce & Gårding 1978), who wrote a thesis about the intonation of the Stockholm dialect (1977). My contrastive prosodic studies date from Bertil Malmberg's seminars in the fifties with Kerstin Hadding as one of its members. My licentiate thesis (1959) compared English intonation with that of two dialects of Swedish. One of these was the subject of Hadding's thesis (1961). Ilse Lehiste's *Suprasegmentals* and also Pierre Delattre's cross-linguistic phonetic studies inspired my short manual Kontrastiv prosodi (1973).

[2] This project, mainly the work of Robert Bannert, was presented in *Praktisk lingvistik* 1, 3, 5 and summarized in our *Working Papers* 21. The French and Greek material for this lecture was analyzed in collaboration with Paul Touati and Antonis Botinis. I also profited from discussions with other prosodist members of my seminar: Anne-Christine Bredvad-Jensen, Lea-Liisa Lahti, Barbara Prohovnik and Ursula Willstedt. Special thanks go to Ursula Willstedt for efficient help, in particular with the preparation of figures and recordings. Recordings played at the oral presentation and referred to in this paper will be available in a cassette accompanying one of the forthcoming issues of *Praktisk lingvistik* to be published by the Department of Linguistics and Phonetics, University of Lund.

When we compare different languages we run into problems not only of analysis but also of terminology. I hope my terminology will be clear from the context. I just mention that I use the term 'accent' generally, also where others might prefer 'stress'.

Prosodic features are, phonetically speaking, features of fundamental frequency which I call pitch, duration and intensity. So far the model only generates durational patterns and pitch patterns. Our only defense is that intensity in most cases parallels pitch, which is easier to work with experimentally.

## Presentation of the model

For the demonstration of the model I will use the sentence *Madame Marianne Mallarmé has a mandolin from Madrid,* spoken in Swedish, Greek and French. This sentence is comparable in all three languages for several reasons. It has the same (or similar) meaning, it was elicited in the same context, it has the same syntactic structure and similar phonetic structure, including 'same' accents on 'same' syllables. The prosodic systems of the three languages are quite different, however. If I choose the role of prosody in the lexicon for my characterization of them, then Swedish would need two degrees of quantity and two accents, Greek one accent and French nothing.

You can think of the demonstration sentence as the first sentence of a short story with equal semantic weight given to the three words: *Mallarmé, mandolin* and *Madrid.* Their observed pitch contours and durational patterns in the pronunciation of our subjects are shown in Figure 1.

You can see the fundamental frequency, which I call pitch, move up and down the frequency scale in a partly similar, partly different fashion. It is precisely these similarities and dissimilarities that we want to bring out in a systematic way, together with similarities and differences in durational patterns. It is also noticeable that the rate of speech varied with the slowest rate for the Swedish speaker and the highest for the French speaker. Figure 2 shows the input to the model which will produce durational patterns and pitch contours that fit these observed curves. Word boundaries are marked by spacing, phrase boundaries by slashes and sentence boundaries by square brackets. 'A' means word accent, 'PA' phrase accent and 'SA' sentence accent. The locations of the sentence accent, phrase accents and word accents have been determined by the context, the first sentence of a short story.

Figure 3 shows the main components of the model. For each component

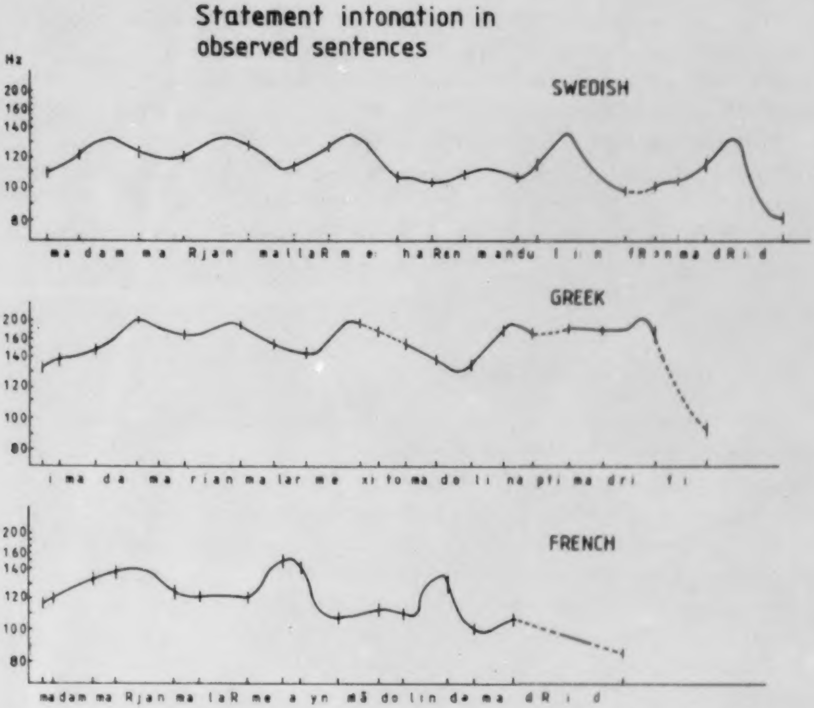

Figure 1

Typical input sentences

```
                              PA                    PA               SA
               A1      A1     A1                    A1               A1
Swedish  St[madam: marian: malarme:// har en manduli:n / frɔn madri:d]St

                  A       A          PA A                  PA                SA
Greek    St[ i madam marian malarme // exi to mandolino / apo tin madriti ]St

                                    PA               PA         SA
French   St[madam marian malarme / a yn mãdɔlin / də madrid]St
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word boundaries: spacing
phrase boundaries: / //
sentence boundaries: [ ]

A : word accent
A1: acute word accent
PA: phrase accent
SA: sentence accent
St: statement

Figure 2

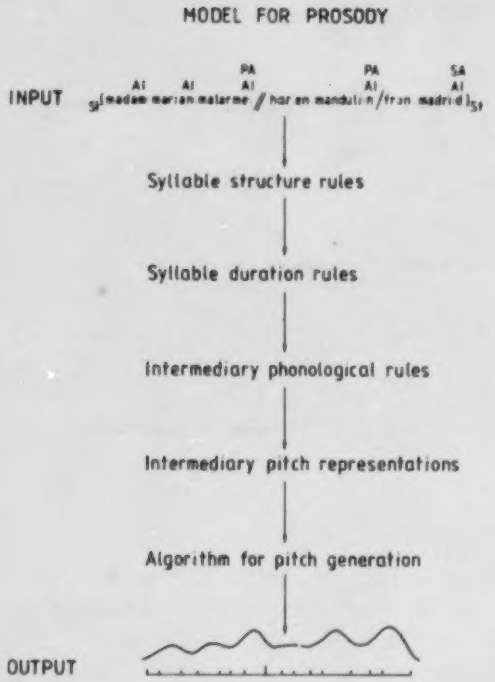
MODEL FOR PROSODY
PA
PA
SA
AI
AI
AI
AI
AI
INPUT
St[madam marian malarme // har en mandulin/frɔn madrid]St
Syllable structure rules
Syllable duration rules
Intermediary phonological rules
Intermediary pitch representations
Algorithm for pitch generation
OUTPUT

Figure 3

there is an appendix with conventions and prescriptions, but for the sake of simplicity the appendices are not shown in the figure. Conventions are general rules and prescriptions are language-specific rules. An important result of this arrangement is that the model is convenient for prosodic comparison. At each stage of the generation we can see what is general and what is specific.

I shall now demonstrate how the model works for our Swedish, Greek and French input sentences.

In the first compartment of the model the words and morphemes within a phrase are syllabified. Before this can be done, access is needed to rules that prescribe what happens to segments at the word boundaries within phrases. For instance, when double consonants occur in Greek, one is reduced, and when two vowels come together, one of them is deleted.

These rules are similar for all languages but they are typically more or less obligatory and conservative depending on the style and the language. Swedish, for instance, is more conservative than French and Greek.

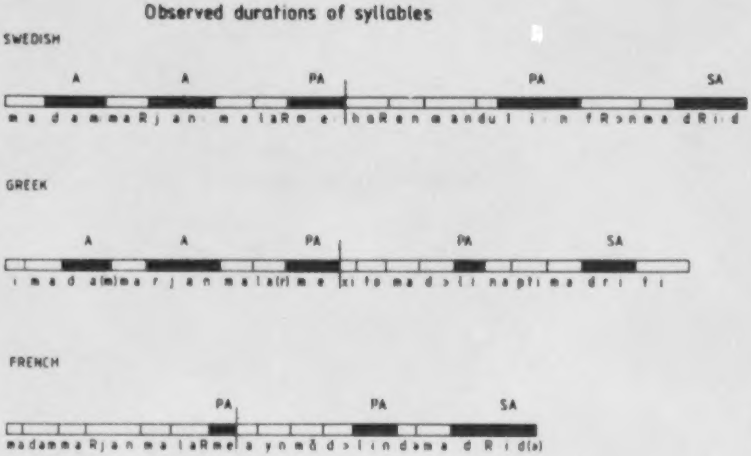

Figure 4

When the word boundary reductions are completed, the syllabification is carried out. One general rule says: to refer intervocalic consonants to the following syllable and form the largest possible syllable-initial clusters. For Swedish, as for other Germanic languages, however, this rule is blocked by accented words and morphemes. In these cases the morpheme boundary is respected by means of a glottal closure before an initial vowel or a lengthened oral closure in connection with an initial consonant.[3]

At the next stage, the durations are generated for the syllables. To find comparable durational rules we use the following technique. Sentences are constructed in which some pertinent words are exchanged for the same sequence of nonsense syllables. The purpose is to avoid disturbance on duration due to differences in articulation. One example of our constructed sentences:

French: 'Madame Marianne Mallarmé a une *lalala* de *lala*'

Swedish: 'Madame Marianne Mallarmé har en *lalalá:* från *lalá*:'

Notice that the Swedish syllable structure rules impose a long vowel on the accented syllable.

Measurements of these and similar sequences indicate that, as a general rule, the duration of a syllable is nearly proportional to the number of

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[3] In Gårding (1967), chapter 7, a comprehensive frame was presented for juncture in different phonetic contexts.

segments it contains, except for lengthening at boundaries and some other complications (see Figure 4). In Swedish the accented syllables are long mainly because they contain more segments than the unaccented ones. According to the Swedish syllable structure rules, there is always a long vowel or a long consonant in an accented syllable and each should be counted as two segments. The unaccented syllables in Swedish vary in duration because they can take a different number of segments, from 2 to 4 in the test sentence.

In Greek it is chiefly the accented syllables that vary with the number of segments, from 2 to 4 in the test sentence, whereas the unaccented syllables, which are CV or CCV, are very equal in duration and hit a Germanic ear like a firing machine gun.

In French all syllables vary in duration according to the number of segments except the final one with sentence accent, which is lengthened considerably.

For a generative scheme I can use a basic syllable duration common to all these languages, namely the duration of an unaccented CV-syllable, actually a *la*-syllable. I set the duration of such a syllable to 2 units. Its actual duration in seconds depends on overall length of the sentence, speech tempo, etc.

I can go on using the same segment-counting scheme for all three languages and I get a good approximation to observed durations except for lengthenings at phrase boundaries where the speakers differ. For the Swedish and Greek speakers, phrase lengthening corresponds to one extra unit. For French the duration of the sentence final words has been increased by four units.

I am well aware that this treatment of duration does not catch finer shades, such as inherent length of segments, the nice balance between a consonant and vowel in a CV-syllable, increase of length due to accent and pitch movement, etc.[4]

However, for the purpose of generating duration and comparing durational systems, at least in the three languages studied here, the scheme seems to be sufficient. Figure 5 sums up durational differences in the three languages. The figure shows observed relative durations of the three test sentences next to durations obtained by the generative scheme.

The fit is rather good. Let me point out the most important durational differences. Each language has one type of syllable that shows great constancy in duration. In Swedish it is the accented syllable, in Greek the

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[4] See Lehiste (1970) and, for a general discussion of the role of temporal patterning in speech, (1979).

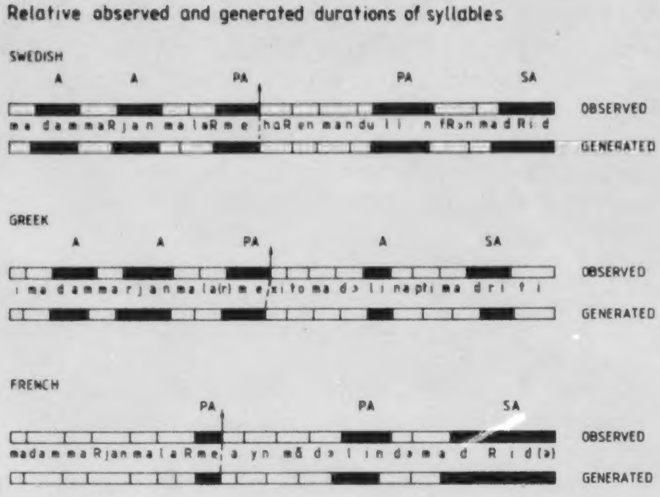

Figure 5

unaccented syllable and in French the sentence-final syllable (which of course is always accented).

I shall now go over to the intermediary phonological rules. These rules delete and insert context-dependent symbols. One such rule which is fairly general across languages is that there are no pitch movements in connection with accents after focus. Yet the accent contrast, as in Greek, is still there. It may now be carried by the durational feature which was generated by the previous rule and by intensity.

The recordings and Figure 6 illustrate the difference in the effect of this rule in Swedish, Greek and French sentences which have been elicited in a context that calls for *focus* on *Mallarmé*. In Greek and French the pitch contour is flattened after focus. For Swedish on the other hand, the situation is different. Here the accents still have their pitch manifestations after focus.[5] This must be due to the different lexical and psychological status of the accents in the prosodic system of Swedish.

The intermediary pitch representations mark another step on the way from an abstract phonological input towards the final concrete pitch con-

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[5] This is one of many new observations in Bruce (1977). Excepted are certain contexts with fast tempo. It is interesting to note that those Finland-Swedish dialects which have no accent distinction behave like French and Greek (Kerstin Tevajärvi, work in progress).

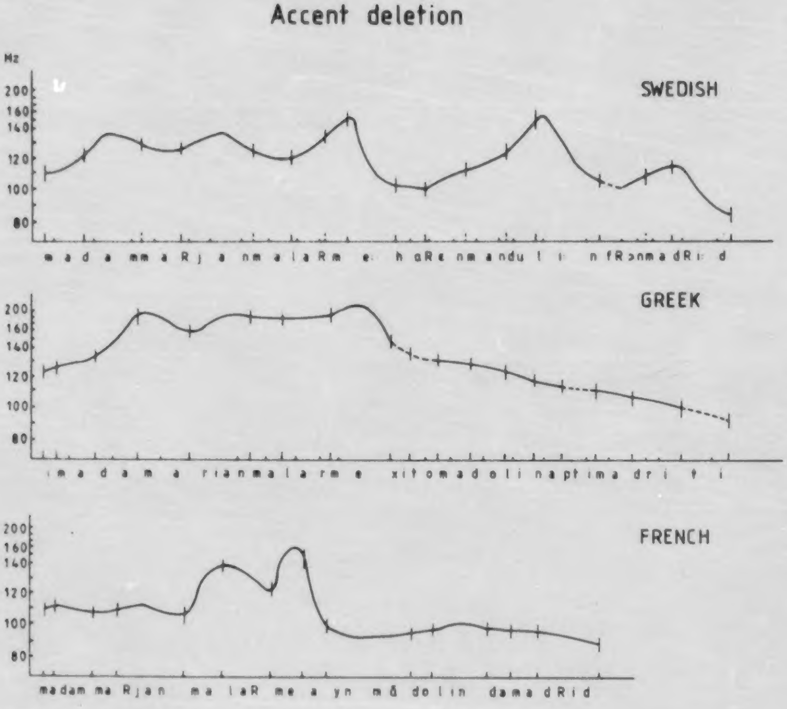

Figure 6

tour. At this stage sentence and phrase intonation are specified as *falling* or *rising*, accents as *Highs* and *Lows* or combinations of *Highs* and *Lows*. I will not go into the principles behind this analysis, just comment briefly on some similarities and differences that follow from it.[6] Sentence intonation and phrase intonation are similar for all three languages. Statement intona-

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[6] One such principle is classical, namely that it is desirable to separate context phenomena from truly phonological features. To find rules that respect this principle, context phenomena in intonation need to be clarified (cf. Rule 5 in the following algorithm). For tone languages such phenomena have been formalized, see e.g. Schuh (1978) and references mentioned there. There is one context phenomenon that has been important for the present analysis which I call *preparation rule*. It mirrors the observation that pitch goes up in order to come down and vice versa. This rule seems to hold for all three languages. In French the *Low* at the first phrase boundary is prepared for by a *High* and in Greek all the accents are preceded by *Lows*. The generality of the preparation rule may motivate a change in the word accent representations for Swedish dialects from *High-Low* (fall) for all dialects with a different timing of the fall in our earlier works (e.g. Bruce & Gårding 1978) to the present *High* for the southern dialects as compared to *Low* for the others.

Algorithm for generating pitch contours

Rule 1. Sentence and phrase intonation

Draw the tonal grid using information about sentence and phrase intonation and boundaries

Rule 2. Sentence and phrase accent

Insert Highs and Lows on the grid according to language and dialect

Rule 3. Word accent

Insert Highs and Lows on the grid according to language and dialect

Rule 4. Insisting Word accent

Adjust Highs and Lows according to language and dialect

Rule 5. Context rules

Adjust Highs and Lows according to context

Rule 6. Concatenation

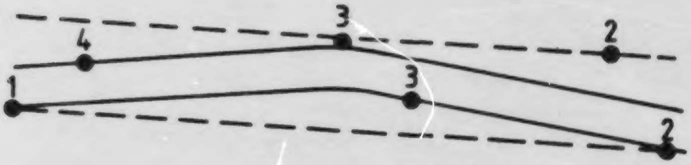
Connect neighbouring generated Highs and Lows

**Figure 7**

tion is falling. Phrase intonation is falling if the phrase is sentence-final and rising if it is initial.

Accents are different. In Swedish the accent manifestations are dialect-dependent. In the dialect spoken here in Skåne, which is old Danish territory, phrase and sentence accents are low, falling. In Greek and French the

Typical grid with insertion of Accent Highs and Lows



1. Grid: Sentence and Phrase intonation
2. Sentence Accent High and Low
3. Phrase Accent High and Low
4. Word Accent High

Figure 8

phrase accent is high and rising and only the sentence accent is low and falling.

With the new pitch notation given by the intermediary rules we are ready for the last stage, the algorithm, the rules that will make the *Highs* and *Lows* of the accents into turning-points in a pitch contour (Fig. 7). Rule 1 produces the overall shape of the contour in the form of a tonal grid (Fig. 8).[7] The grid should be thought of as the general plan for the intonation of the sentence.

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[7] The four auxiliary lines of the grid can be regarded as acoustic correlates of the four phonological levels, used by Kenneth Pike in his analyses of American English and of tone languages. Similar correlates were found in the pitch values of end points and turning points in pitch-contours from Swedish dialects and RP English (Gårding 1959). The modes of my histograms were not sharp, probably because I disregarded the general decline in pitch values over utterances.

To construct this grid we use the input information about the main phrase boundaries and about phrase and sentence intonation. We also need knowledge about pitch values at which the voice starts and ends at the phrase boundaries, actually knowledge that we have gathered from studying the same intonation contour in sentences with different phonetic structure. The grid you see here is for a rising-falling sentence intonation. The two interior solid lines delimit the normal range of the accents. A *High* will be on the upper solid line and *Low* on the lower one. The exterior hatched lines are more straight. They are used for *Highs* and *Lows* connected with the sentence accent, focus, and for other pragmatic effects. They mark the upper and lower bounds of the speaker's regular register, approximately an octave. The numbers on the grid indicate how the accents are inserted.

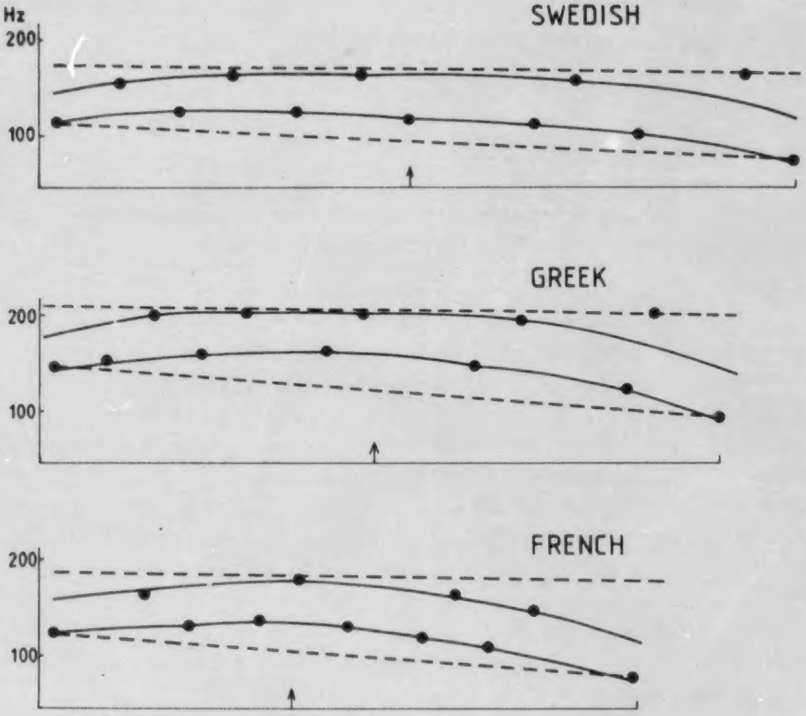
Back to the algorithm. Rule 2 inserts the *Highs* and *Lows* of the sentence and phrase accents. Rule 3 inserts the word accent. Rule 4 takes care of pragmatic effects, such as *accent d'insistance* in French and accents for emphasis and contrast in other languages. Rule 5 makes context adjustments and Rule 6 prescribes how the generated points should be connected by a smooth curve.

I will now give you a general idea of how the rules work in practice. For this demonstration I shall go back to the contours for Swedish, Greek and French that I have shown already (Fig. 1).

First we will put the tonal grids over these contours (Fig. 9). You can see that, in principle, the grids are similar in shape. The differences are due to the different overall durations of the sentences. On the grids I have placed the points generated by the rules of the algorithm. The fit is quite good. In most cases there is a turning point in the observed contour whenever there is a point on the grid and it is clear that, if these points are joined by a smooth curve, we will get a good approximation to the observed contours.

This analysis brings out similarities and differences in the intonations of the three languages. The grid itself represents the similarities in intonation. A rising frame for the accents of the initial phrase, followed by a falling frame for the accents of the final phrase, corresponding to the impression of a rising-falling sentence intonation. The differences in the intonation of the three languages are caused by what happens within this grid. In Skåne Swedish the phrase-accented syllables have a fall, that is a *High* followed by a *Low*, whereas in Greek the corresponding syllables have a *High* preceded by a *Low*.

For French three points are generated in connection with the phrase. The first point is *Low* and marks the beginning of the phrase, the second and the third points will produce a rise for the last accented syllable.



Tonal grids for statements in Swedish, Greek and French.

Figure 9

To sum up differences in intonation:

- French and Greek mark the phrase accent by a rise, Skåne Swedish by a fall. In Greek and Swedish there are additional accents with lexical function within the phrase, each characterized by a *High*.
- In Swedish there are two kinds of those phrase-internal accents, Accent 1 and Accent 2, but not in the sentences used here.
- In French the beginning of a word with phrase accent is signalled by pitch, low pitch. In Swedish as in other Germanic languages a boundary is signalled by a segmental feature, a glottal stop or a lengthened consonant.

## Prosodic transfer

I have now come to the second part of my paper where I will discuss prosodic transfer. It is obvious that prosodic transfer is responsible for a great deal of what is generally described as a 'foreign accent'.

Recordings made by means of a laryngograph will serve as an introductory demonstration of prosodic transfer. A laryngograph records the voice straight from the larynx before it has been modified by articulation.

In Fig. 10 you can see the texts behind four stretches of laryngeal speech, recordings of a Swedish text spoken by a Swede and a Frenchman and recordings of a comparable French text spoken by the same two people. To make the text comparable I had to use words accented on the last syllable. This is the general rule for French but in Swedish only a small group of words have this pattern. Even with a text like this where the distribution of syllables and accents is similar and not at all normal for Swedish it turns out to be quite easy to hear the difference between the Swedish and the French speaker. And it is next to impossible to hear the difference between the two speakers' native and foreign performances. The reason is, of course, that the prosodic transfer has been almost total. No matter what degree of transfer the speaker manifests, total or partial, the model can be used to specify it, as I will show you now. If we first listen to the complete French text, articulation included, read by our Swedish speaker, and analyse this speech by our model we will find that the following features have been transferred from Swedish (Fig. 11).

1. *Input features*. There are too many accents in the input, and the accents are always combined with length according to the Swedish rule.

2. *Syllable structures rules*. The syllables are not linked before accented vowels: [sɛt–ɛ̃strymã] with a glottal closure before the vowel instead of [sɛ – tɛ̃strymã] (*cet instrument*).

3. *Syllable duration rules*. Accented syllables are too long and sentence-final words are not long enough.

4. *Intermediary phonological rules*. There is manifestation of pitch after focus.

5. *Pitch representation rules*. The phrase accented syllables are given falling intonation instead of rising, and transferred accents which should not be there cause additional disturbances.

So much for the Swedish speaker. In the corresponding Swedish text

Compared text

Madame Marianne Mallarmé
har en mandolin från Madrid.
Hon har fått sitt instrument
av sin far,
som är toreador i Provence.
Hon har också en kanapé från Nepal,
som hon tagit med från sin tant,
Odile Bertout,
en famös feminist.

1. Swedish speaker
2. French speaker

Madame Marianne Mallarmé
a une mandoline de Madrid.
Elle a eu cet instrument
de son père
qui est toréador en Provence.
Elle a aussi un canapé du Népal
qu' elle a hérité de sa tante,
Odile Bertout,
la fameuse féministe.

3. French speaker
4. Swedish speaker

Figure 10

spoken by a Frenchman (Fig. 10) the following features have been transferred from French (cf Fig. 11).

1. *Input features*. Obviously there have not been any marks for length in his input. Nor have there been accents within the phrases.

2. *Syllable structure rules*. The syllables are linked before accented vowels.

3. *Syllable duration rules*. As a result of the accented syllables not having any marks for length they are not long enough. Sentence-final syllables, on the other hand, are far too long.

4. *Intermediary phonological rules*. There is pitch *deletion* after focus. Since one characteristic of all spontaneous speech is that practically every phrase has a focus, there is much too much pitch deletion in French Swedish.

Prosodic transfer in terms of model

1. Input features
2. Syllable structure
3. Syllable duration
4. Intermediary phonological
5. Pitch representation

Figure 11

5. *Pitch representation rules*. The phrase-accented syllables are given rising instead of falling pitch, which, by the way, makes them sound like Accent 2, at least to somebody from Skåne.

With this simple scheme I think I have caught the essential features of the prosody of the utterance and prosodic transfer. These features are of course known but the model puts them into a coherent and meaningful frame. You have seen that the scheme can be used not only in the direction from Swedish to French but also from French to Swedish. And it is quite possible that it can be used to describe any prosodic system and transfer. Does this indicate that the structure of prosody is not so complicated once we leave the lexical level?

## Aspects of learning difficulties, aspects of acceptability and intelligibility

Everybody agrees that contrastive analyses are valuable for a language teacher but there are at least two other aspects that are important, namely aspects of difficulty for the learner and aspects of acceptability and intelligibility for the native listener. Unless a teacher knows something about these matters, he doesn't know how to optimize his teaching effort. Let me take the learning difficulties first and discuss them in the order of our model (Fig. 11).

The input features belong to the deepest level of the phonological system.

They represent a set of fixed patterns in the nervous system which may have to be reorganized in the learning process. Apart from the input features discussed earlier in my paper, there are also rules of distribution that have to be learned and unlearned. For instance, a French learner of Swedish would have to learn not only which syllables should be accented but also what kind of accent they should have. A Swedish student of French would have to unlearn phrase-internal accents, etc. I have sidestepped these problems in my paper by choosing an input with a similar distribution of accents. Other knotty problems for the learner are when prosodic features are independent units in one language but occur in fixed combinations in the target language. Accent in Swedish is a good example. It comes prepackaged together with length and it is difficult for the Swede to undo this package and produce short, accented syllables.

The syllable structure rules and the syllable duration rules of the mother tongue are also deeply ingrained habits that are difficult to break. For a Swedish speaker not to start an accented initial vowel by a glottal closure is as difficult as the opposite situation may be for a French speaker. For a Swede to make an accented syllable short is as difficult as for a camel to pass through the needle's eye.

The intermediary phonological rules are as obstinate as other phonological rules. As for the example given here earlier about differences in pitch deletion after focus, I remember that the English lecturer at the university used to remind us of the necessity of keeping the pitch down after focus. Letting the voice go up and down as in Swedish made us sound like an 'old woman talking to a parrot'. That was in the old days of uninhibited male chauvinism.

The pitch representation rules present another kind of difficulty. The direction that a pitch movement takes over a short time interval is difficult to perceive and therefore difficult to learn. This is particularly true for speakers of accent languages. It is not the direction of the movement that counts in an accent language but rather the movement itself.[8] And it is typical of dialects in accent languages that they use different directions for their accents. This happens in Swedish.[9]

[8] This was shown in early experiments with synthetic speech, e.g. by Bolinger (1958). That more perceptual weight is given to the direction of tone by speakers of tone languages than by speakers of English has been shown by Gandour (1978).

[9] As pointed out earlier the word accents in the South can be analysed as *High* as compared to *Low* in other parts of the country. The dialectal situation is similar in Denmark. According to Nina Thorsen (1980) accents are *Low* in Copenhagen Danish but *High* in other Danish dialects, as e.g. in Jutland (personal communication). Gillian Brown et al. (1980) describe accented syllables as *High* in Edinburgh but *Low* in Glasgow.

Original: Madame Marianne Mallarmé a une mandoline de Madrid

spoken by a Swede

Manipulations after French model

1. Tempo
2. Rhythm (Relative durations of syllables)
3. Intonation ($F_0$-pattern)
4. Tempo and Rhythm
5. Tempo and Intonation
6. Intonation and Rhythm
7. Tempo, Rhythm and Intonation

Figure 12

Speakers of tone languages are much more sensitive to these short term pitch phenomena. Also, in these languages they have a different place in the prosodic system.

There is some research in our department aiming at establishing a rank order of difficulty for foreigners speaking Swedish. Our material consists of samples of Swedish spoken by representatives of some 25 languages. Our results indicate strongly that native durational features at the word as well as the phrase level are extremely persistent and that new durational features are correspondingly difficult to learn.[10]

The rank order of difficulty should be compared with a rank order of acceptability and intelligibility. Are all these prosodic features equally important? Could we treat some of them lightly and pay more attention to others which may hold key positions in the learning hierarchy?

To find answers to some of these questions we have started a series of experiments, in which a special kind of speech synthesis is used. A computer program makes it possible to start with natural digitalized speech and make preplanned changes in it.[11]

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[10] Robert Bannert is currently working on these problems in the project 'Swedish immigrants' communication: Problems of understanding and being understood' (see References).

A series of changes were made in the sentence *Madame Mallarmé a une mandoline de Madrid* pronounced by a Swedish speaker. It has all the prosodic shortcomings I have described here.

Figure 12 shows the manipulations which have been made. All of them have to do with *tempo, rhythm* and *intonation*. By rhythm I mean relative duration of syllables. First I changed just one of these variables, then two of them. Finally all three. All the changes were made according to the model. They were made quite recently in Uppsala and have not yet been tested on more than four French people. *In the lecture, the series of changes was presented in a recording with comments as follows.*

'First you will hear the digitalized original sentence. *A very nice typical south Swedish accent.*

And now a change of tempo. *A tempo change is a great improvement.* We may draw the natural conclusion that we sound better in French if we speak faster.

Then follows a change of the relative durations of the syllables, the rhythm. *Rhythm without tempo does not help very much.*

Now the intonation has been changed. *The French evaluators do not like this.* As a former French teacher, I think it sounds fine. The student has made an effort.

Now a change of two variables: tempo and rhythm. *Quite good.*

Now tempo and intonation. *Also quite good.*

Next rhythm and intonation. *Quite acceptable.*

Finally the one where we have changed all three parameters: tempo, rhythm and intonation. *Almost too good* is the French verdict.'

Similar manipulations in Swedish spoken with Greek prosodic transfer have been tested in a more formal way by several listeners. The results indicate that tempo and rhythm are more important than intonation. Intonation adds to the good impression however.

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[11] This program, called ILS, using the linear predictive coding technique, has been implemented and developed at the Phonetics laboratory of the Department of Linguistics, University of Uppsala. The experiments described here, as well as earlier ones by Bannert and by Bruce and Gårding, were carried out there with the competent help of Lennart Nordstrand.

We were surprised at the importance of tempo. It suggests that a language may have a natural specific tempo attached to it. To stress this point the speech of my French speaker was stretched out by the same technique to fit the tempo of the Swedish speaker with the result that he sounds rather depressed (as was illustrated by the recording).

We are in the midst of all this experimentation and it is too early for general conclusions. Still, both the foreign accent studies and the acceptability tests seem to point in the same direction: Once the accents are in the right place (as they were in our input) then tempo and rhythm have a strong position in the prosody. They are fundamental for acceptability and, most probably, also for intelligibility. This reminds us that prosodic features are not just cosmetics that we put on to make up for various shortcomings in our foreign speech. They are an essential part of communication.

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# TEACHING THE SPOKEN LANGUAGE

This paper falls into two sections. In the first section I shall make some remarks about spoken language which I shall then make use of in the second section. The second section addresses the problems of what it might mean to teach and to assess the communicative competence of adolescent native speakers of a language.

## Section 1

I am going to draw three distinctions in this section which are certainly open to criticism. I have to introduce them briefly, with little justification, and the way I introduce them will be so simplistic as to be potentially misleading. In each case the distinction I draw actually involves a continuum, rather than two discrete categories, yet, in order to draw each distinction rather quickly, I shall be forced merely to characterise the end points of each continuum.

### *1.i Primarily transactional and primarily interactional speech*

The first distinction I want to draw is between primarily transactional and primarily interactional speech (cf. Brown 1978 and forthcoming)[1] I shall take it that primarily transactional speech is essentially *message-oriented,* where the main reason for speaking is that the speaker should transfer information to the hearer. Examples of primarily transactional speech would be: a driving instructor telling his pupil how to change gears, a person giving a friend an address, a doctor telling a nurse what treatment he wants to be administered to a patient, a cook telling apprentices how to bake a cake. In all these cases the hearer needs to be told the content of the message clearly and explicitly. If the message is not clear there will be

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[1] An adequate discussion would distinguish two scales here: more-or-less transactional and more-or-less interactional.

consequences which are unfortunate: the gears may crash or the nurse may give the patient the wrong pills.

It is not the case that primarily transactional speech is delivered in a manner which ignores the hearer's needs and state of knowledge. All language is 'recipient designed'. The primary reason for the primarily transaction utterance, however, is the transference of the message content.

With primarily interactional speech, what is most at issue is the establishment and maintenance of social relationships. It is primarily *listener-oriented*. Chatting at a bus-stop or in a train or at work about the Royal Wedding, or the price of coffee, or the efficiency of the transport system, participants typically express opinions and do a lot of agreeing with each other. The extreme of primarily interactional conversation is well described by Pirsig in *Zen and the art of motor-cycle maintenance*. He writes of the way two elderly men talk to each other: "the conversation's pace intrigues me. It isn't intended to go anywhere, just fill the time of day ... on and on with no point or purpose other than to fill time, like the rocking of a chair" (1976:313).

Primarily transactional speech will tend to be articulated more clearly and deliberately than primarily interactional speech. A listener may ask a speaker to speak more slowly, or to repeat what he has said, when it is the message that is primarily at issue. We do not expect, when chatting with people at bus-stops about the weather or the way buses bunch themselves together and all arrive simultaneously at the bus-stop, to ask the speaker to speak more slowly. We tend to nod and agree, even if we have not heard just what it is that he has said. The clarity of the message is much less important in primarily interactional speech.

### *1.ii 'Short' and 'long' turns*

The next distinction I want to draw is between 'long turns' and 'short turns'. The scalar nature of this distinction is quite clear. I shall take 'short turns' to be turns where a speaker contributes as little as one word, or up to three or four phrasal or clausal chunks, to a mutually structured conversation. In a long turn, one speaker becomes responsible for the structure, for a while. He may produce a brief exemplificatory narrative, tell a joke, describe an event, justify an opinion.

It appears at the moment to be fashionable, both in the data which conversation analysts examine and discuss, and in language teaching – particularly within functional syllabuses – to pay particular attention to the forms and functions of short turns. This is a natural area of interest for conversation analysts, who are concerned with how participants take turns and together construct a conversation. It seems to me a most welcome and very proper development in the early stages of language teaching, in that it is a development which appears to mirror the normal acquisition of language skills in all cultures, both preliterate and literate. Normal children, in all cultures, apparently acquire competence in short turn speech. It is not clear that all children acquire the same degree of control in long turn speech.

In the second section of this paper I shall suggest that there are some features of long turns which some adolescent native speakers of English appear not to control very well. One such feature is the ability to identify what it is they are talking about, and to maintain a distinction between competing referents. This particular ability is probably not very important in interactional speech, since this style of speech produced by all types of speaker, adolescent or adult, typically shows a good deal of fuzzy or vague reference. However the ability to make it clear exactly who or what is being referred to at any one time in a long turn is crucial in primarily transactional language. It seems to me likely that this ability continues to develop after adolescence. In a considerable body of data collected from elderly men and women, including speakers who had left school at fourteen and undergone no subsequent formal education, I observed less evidence of lack of control of this feature, than we find in the speech of many adolescents.[2]

### *1.iii Spoken language influenced by written language and spoken language not influenced by written language*

The last distinction I want to draw is, in many respects, familiar. It seems clear that much of the spoken language produced by highly literate members of literate societies is very strongly influenced by the written language. Much of the speech produced by partially literate or pre-literate members of literate societies is very little, or not at all, influenced by the written language. The distinction I want to draw here has some similarities with the scale of 'formal to colloquial' distinguished by Joos (1967), 'formal to informal' distinguished by Leech and Svartvik (1975), and the 'elaborated and restricted codes' identified by Bernstein (1959).

The distinction is important both for linguists and language teachers because the 'norm' of description for a language, what is described in grammars and most courses for foreign students, is taken to be the highly literate form, which enjoys an immense prestige among educators. They, of course, control this mode as well as a range of less literate, more 'colloquial', modes. However, the majority of speakers in any literate society will not control the highly literate mode. And a substantial minority will not control any mode which shows any sign of being influenced by the written language. Such a minority may be held to be 'linguistically disadvantaged' within a literate society. One indication that it is the relation to the written language which is at issue is that the notion of 'linguistic disadvantage' does not seem to be applicable, certainly not in the same way, in preliterate societies.

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[2] Data which included the speech of many elderly speakers was collected on project HR 3601 *The Intonation of Scottish English* (1975–1979) supported by the Social Science Research Council. Data consisting of the speech of adolescents is being collected on project H/140/12, *Competence in Spoken English*, supported by the Scottish Education Department.

In the past decade there has been an enormous increase in the number of studies of spontaneous speech, that produced by children and adolescents in particular. One may cite studies by such scholars as Labov, Chafe, Ochs, Cicourel, Jefferson and other ethnomethodologists working in the United States and Levinson, Sinclair and Coulthard, Burton, Stubbs, Wells, Fawcett as well as the Nuffield study of the speech of teenagers in Britain. These scholars often produce extensive transcripts of spoken language (variably tidied up in the interpretive process which yields a written transcript). Data of this sort surely ought to convince us that young people do not, in general, talk like their teachers. They typically produce forms of spoken language which are much less influenced by the written form.

I shall mention here only four of the most obvious differences:

*a* highly literate language is characterised by rich and complex syntax where subordination is regularly marked by *that* complementisers, relative pronouns, and so-called 'logical connectors' like *besides, although* and *for example*. Non-literate spoken language relies much more on simple adjacency and ordering, and shows relatively little use of the longer connectors and comparitively more use of multifunctional short connectors like *and*.

*b* highly literate language contains a large proportion of structures which are readily relatable to the categories *sentence* and *clause*. Non-literate speech contains a much smaller number of structures which can be confidently related to these categories. (Crystal, 1981, describes some of the problems.)

*c* highly literate speech typically contains richer and more specific lexis than non-literate speech which is dense with non-specific forms like *thing, do, got, stuff, place* and *things like that*.

*d* highly literate speech typically packs information fairly densely. This produces, for example, heavily pre-modified noun-phrases. In non-literate speech it is rare to find such dense packing. Vallian (1981) reports that, in a corpus of speech produced by under-5s, she finds no

> examples of NPs with more than two premodifying adjectives except where one adjective is repeated several times. Yule (1981) found no NPs with more than two pre-modifying adjectives in an extensive corpus of speech produced by 37 pairs of first-year undergraduates performing a transactional task. I think those who teach first-year undergraduates will agree with me that, in most cases, they would not yet be described as highly literate, which is hardly surprising since most of them have still relatively limited experience of the written language.

A relevant question for language teachers seems to me to be the following: if we accept that highly literate spoken language is, in the main, the prerogative of a middle-class, middle-aged, highly literate minority, does the 'norm' produced by that minority represent an appropriate standard of attainment for young, native or foreign, students of English, who are either in the throes of acquiring a comfortable literacy or may never fully acquire it?

Of course there are outstanding students who progress rapidly. They rapidly attain a high degree of literate articulacy in their own language and in foreign languages. Such students will develop those modes of thought and cognitive structures which Goody, in his inspiring book *The domestication of the savage mind* (1977), has claimed cannot be available to the pre-literate individual. Such students will always be in a minority and will tend to learn, no matter what they are taught. It seems at least possible that one contributory reason for the admitted failure, for the *majority* of adolescent students, of many foreign language teaching programmes, is that we are trying to teach adolescents to speak in a way which, typically, adolescents do not speak in. Naturally it is important that students should understand what is addressed to them. That is quite different from being expected to produce heavily modalised forms like the following:

Would you mind if I used your telephone?
I wonder if you have any objection to me using your telephone.
Would you be so kind as to let me use your telephone?
I wonder if I might use your telephone.
Do you think it would be possible for me to use your telephone?

There seems to be a rash of paradigms of this sort turning up in language materials at the moment and these are, of course, perfectly appropriate forms for adults to use. These heavily modalised forms are not, however, characteristic of native adolescent use (any more than is the distinction between *may* and *can* forms which is frequently painstakingly taught to foreign adolescents). They are characteristic of highly literate adult speech.

The characteristics of native, partially-literate speech, the speech of typical adolescents, ought to have relevance for the teaching of foreign adolescents learning English. It seems clear that a speaker can participate productively in a conversation with a rather restricted range of syntactic forms and with a fairly restricted, non-specific vocabulary. The amount of language knowledge needed for adequate production is, in one sense, rather limited. The comprehension task, however, demands very active listener-participation. It demands that the listener interprets the underspecified discourse in terms of a) specific features of context/previous discourse and b) what the listener thinks the speaker is trying to achieve by speaking.

There are cues to the speaker's intentions which are available in the spoken language, but not available in the written language. These cues may include not only intonational and pausal phenomena, which several speakers at this conference have discussed, but also paralinguistic vocal features, often referred to as 'voice quality' (for an excellent technical description of these features cf. Laver, 1980, for a modest pedagogically applicable model cf. Brown, 1977). The phenomenon of 'it is not so much what he said, but the way he said it' is a familiar one, and when there is a discrepancy between the content of the verbal message and the way the speaker presents it, the listener typically responds to the way the speaker speaks. Thus, if a speaker says with an apparently delighted tone of voice *Hey, I have just smashed up my car,* a sympathetic listener is unlikely to respond with *I am so sorry*. He is more likely to ask *Why are you pleased about it?* or *Are you well insured?* If you meet someone who says *Hallo* with a 'warm' breathy voice, you are much more likely to want to stop and talk to the speaker than to someone who says *Hallo* in an abrupt, tense manner. Paralinguistic vocal features (as well, of course, as gestures, facial expressions, proxemics) provide important information about the speaker's apparent illocutionary intention which is particularly important in the interpretation of primarily interactional speech. This is a resource which, as language teachers teaching listening comprehension, or discourse analysts analysing conversational interaction, we ignore at our peril. Of course we have as yet no developed model which can take account of such modalities. The importance of the phenomena in spoken language, since as we have said they can actually override the verbal message, is such that we cannot afford to continue to ignore them.

In the next section I shall rely on the three distinctions I have drawn in this section: primarily transactional versus primarily interactional, long turns versus short turns, and highly literate versus pre-literate. May I remind you that whereas I have merely characterised the ends of the continuum in the case of each opposition, I think it is important to realise that in each case these oppositions are scalar ones.

## Section 2

In this second section I want to tell you about some work we are doing in Edinburgh[3] with native speakers of English, school leavers of sixteen. I shall go on to suggest that the sort of work we are doing has implications for foreign language teaching.

### *2.i The problem for native speakers*

This work arises as a result of a number of educational reports published in Britain over the past fifteen years, which have suggested that more attention should be given in the secondary school curriculum to the spoken language of the students, that students should be given more time to 'talk', and, even, that there should be some attempt to assess the ability of the students to express themselves in spoken English. This interest in spoken language coincides with what is seen by many as a worrying decline in competence in the written language. Moreover there seems to be some unspoken implication that if school leavers cannot express themselves in the written language, the eduaction system should at least ensure that they can express themselves in speech which may, in some sense, compensate for lack of proficiency in the written language. (Many children do need help in expressing themselves in the spoken language, particularly in transactional long turns. However, the ability to express himself in speech cannot possibly compensate the child for lack of ability in the written language.)

In order to spur on work in an area which, despite the urgings of these several reports, few people have been tempted to tackle seriously, the government has recently made money available for the investigation of the spoken language of pupils in the secondary school system. In Scotland, a provisional scheme of examination has been drawn up which is to assess the proficiency in spoken language of the bottom 30% of the ability range of 16 year-olds. These are pupils who are not expected to perform satisfactorily (or, in some cases, at all) in written examinations. The assessment is to consist of two parts. The first part will consist of an impressionistic profile of a student's spoken language abilities, compiled by his English teacher over a period of two years. The second part will consist of a test which is capable of being externally moderated, which is applied just before the child

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[3] This work arises from the project *Competence in Spoken English*. I gratefully acknowledge the work of my colleagues on this project, George Yule and Hilary Smith. George Yule is responsible for the development of the analyses I mention in this paper and a good deal of what I now think developed in discussions with him. I alone am responsible for errors, misleading formulations, etc.

171

leaves school. It is hoped that this test will have some 'washback' effect on the curriculum. Eventually it will be applied to the whole of the ability range.

The decision to attempt to test the proficiency of adolescent native speakers of a language in speaking their own language raises the question which I shall now address: what does it mean for a native speaker of a language to be more or less competent in spoken language?

### *2.ii Highly literate standard language and deviance*

The standard approach of most linguists to this question would probably be to examine the formal features of the child's language – those features which have traditionally interested linguists:

*i* features of syntax: how many syntactic structures does the child control – how much subordination does he use – how long are his T-units – how many forms does he produce which deviate from the standard grammar?

*ii* features of morphology: how does the child mark the past tense form – how does he form negatives – what range of modals does he control – how does he control number agreement – how many forms does he produce which deviate from standard morphology?

*iii* vocabulary features: how densely does the child pack rich lexical items – how far is his vocabulary limited to common, non-specific items – how many dialectal forms does he use?

Typically, the linguist would look for features of dialectal and pre-literate speech and, the more such features appeared in the child's speech, presumably the worse he would do in the test. I believe there would be many teachers who would argue that those features which deviate from a highly literate, standard, 'norm' are indeed the features which identify the child's linguistic ability.

Against this view, I would like to make two brief points:

*i* it still has to be shown, *for native speakers,* that a restricted range of syntactic and lexical forms, and indeed, *many* common dialectal features, prevent or even significantly limit the speaker's ability to interact with, and transfer information to, the majority of listeners he meets, if those listeners are not strongly prejudiced against dialectal forms. Since most of us are able to understand most spoken language when it is presented in the form of written transcription, it seems likely that *accent* is the feature which is most disruptive of comprehension.

*ii* the majority of children in the bottom 30% of the ability range, as determined on academic criteria, will be working-class children. However the group will include some middle-class children. I would want to avoid basing a test on those features of language on which middle-class children will necessarily perform better, simply in virtue of speaking a different dialect, not because they are using language to communicate more effectively.

### *2.iii Interactive ability*

Another, nowadays more fashionable, approach to the question of what it means to be more or less competent in spoken language, would be to examine the pupil's ability to interact, to contribute to a conversation. We have conversational data in which some students, who would score very low in terms of a highly literate standard 'norm', converse in a highly competent manner with an examiner, take short turns confidently and cheerfully, contribute to and expand a topic introduced by the examiner, introduce a new topic, check to see if the examiner is familiar with the relevant background information, and so on. Certainly interactive ability would discriminate between members of our population.

It seems reasonable, however, to suggest that interactive ability is the very last ability you should examine in a formal test, and that, of all spoken language skills, this is the most likely to be affected by nervousness or by not liking a particular examiner. It seems preferable, if this aspect of language skills is to be assessed, that it should form part of the long-term impressionistic profile constructed by the class teacher.

A further objection is the following: if it is correct to assume that all native speakers of a spoken language naturally acquire some competence in interactive ability, the assessment of interactive ability in the student's native language looks like some sort of personality assessment, which could probably be made almost independently of language.

### *2.iv 'Long turn' transactional language*

Having thus briskly cleared away two popular candidates for assessment, I now turn to a limited but, I believe, justifiable answer to the question of what it means to be more or less proficient in ones native language.

In contrast to interactive ability, an ability which is situated right in the centre of language is the ability to use language instrumentally to communicate information. (You will remember that all language is 'recipient-designed', so some interactive ability, the ability to monitor the addressee's state of knowledge, is included even here.) The use of language to communicate information has of course always been the language function which philosophers of language and linguists have concentrated on (cf. Bennett

1976:5ff). For many years it was a view which dominated language teaching, and it is probably still true that the type of spoken language most widely *tested* though as far as I can see not *taught* is the transactional long turn, where the student is asked to talk to the examiner about his 'interests' or some other prepared topic. It is generally the case that the language produced is assessed impressionistically, as it hits the examiner's ears, rather in the way a written essay is rapidly assessed. Apart from some non-specific notion of 'fluency' which clearly pertains to the spoken language, in general the examiner looks for control of syntax and vocabulary, or indeed errors in syntax and vocabulary (Mendlesohn 1977), matched against a highly literate 'norm'. That is to say, it seems rarely to be the case that the student's ability to transfer information clearly and efficiently is actually what is being assessed. It is quite hard to see how a teacher could help a student who did badly on such a test to improve his performance, other than by checking over specific syntactic and vocabulary errors with him. Yet surely we have something more to talk about, when we talk of communicating information, than syntactic and vocabulary control. Can we *teach* students strategies which will help them to communicate information efficiently? I believe that we can.

### 2.v. *Analysing the task*

If we want to construct tasks which will enable us to decide a) which students can communicate information, in a test, more efficiently than other students and b) which aspects of the task the students need training in in order to do the task better (and I take it that all teachers are more interested in b)), we have to consider rather carefully what it means for a speaker to communicate information to an addressee.

In everyday life, where a transaction is at issue, a speaker tells a hearer something which the speaker knows about, but which the speaker believes the hearer does not know about. However, the speaker believes that the hearer needs to know about it because he thinks it is relevant to the hearer's concerns. The transactional language the speaker uses is, then, 'recipient designed' to tell the hearer what he needs to know, not more than he needs and, even more importantly, not less than he needs. The speaker will conform to the Gricean maxim of Quantity (Grice 1975) which is a fundamental maxim in the control of transactional language. (It is, note, much less important in the control of interactional language, a point nicely observed by Douglas Adams in *The hitchhiker's guide to the galaxy* (1979:42): 'One of the things Ford Prefect had always found hardest to understand about humans was their habit of continually stating and repeat-

174

ing the very very obvious as in *It's a nice day*, or *You're very tall*, or *Oh dear you seem to have fallen down a thirty-foot well, are you alright?'*.)

If the communication of information is accepted as one of the skills which should appropriately be taught and tested, the task has to be constructed in a way which permits this skill to be demonstrated. We can make several comments on this:

*i* the speaker needs to be in control of the information to be imparted. It must be of a familiar type, well within his cognitive grasp.

*ii* the hearer must not know the information, and the speaker must know that the hearer does not know it.

*iii* the speaker must know that the hearer *needs* the information in order to do something with it. That is, there must be some motivation for the speaker to co-operatively provide the hearer with information which the hearer, for some reason, needs. (A poor task, by these three criteria, would be one where the student sits beside the teacher, looking at the same picture that the teacher is looking at, and is then asked to tell the teacher what is happening in the picture. This demands that the student makes sophisticated assumptions about the pretended ignorance of the teacher.)

*iv* the task should be constructed to elicit the sort of language use which the teacher wants to teach or test. The teacher has no control over the language which may be produced when a student is asked to talk about 'my interests'. One student may choose to give a narrative account of a day at the races, and another may choose to give an annotated list of the necessary implements for basket-weaving. It is not possible for the examiner to specify analytically what the essential information which ought to be conveyed is, in each case, and hence to judge whether or not the student has conveyed it.

There are a few general remarks which may be made about ways of decreasing the level of communicative stress for the speaker. It is easier for the speaker if his addressee is a single, cooperative and friendly person, of the same status as himself. It is easier for the speaker if the task he is required to do provides its own structure, so there is external support for the language he produces. It is easier for him to produce a simple narrative (prompted by drawings) than a simple description (prompted by a drawing or a physical object). The narrative organises the temporal structure of what has to be said. In the description, the student has to select a salient feature and relate other features to that – much more selection is left to him. The most difficult task of all appears to be producing a justification or an explanation: an answer to the question 'why'.

It is also easier for the speaker if he can see what task the hearer is doing, and if he is allowed to point. From the point of view of the teacher, however, the explicitness of the language produced under this last condition becomes much less important, and it becomes much harder to judge the communicative efficiency of the *language* used. If you want to get at control of the language in isolation from pointing, gestural demonstration, and so on, you probably have to place the hearer on the other side of a table, with a low screen hiding what he is doing with his hands. Certainly this increases the artificiality of the situation, but you could argue that there are occasions in real life when one has to explain things to a listener without pointing or using gestures. My hands may be full – I may be putting up my end of the tent while telling you what to do with your end. Or I may have to explain to a garage mechanic what my car has been deviantly doing, which it is of course failing to do when I arrive at the garage. Note that tasks of this sort are difficult for all of us, but we do occasionally have to perform them, and there are some types of job, which might one day be available to the pupils in our population, which demand the ability to deliver transactional information in long turns.

### *2.vi. Establishing and maintaining reference*

Having set up a task carefully, and carefully explained to the student what is required of him, preferably with some check that he has understood, what does the teacher look for in the language thus elicited? Remember that what he is interested in is the speaker's ability to communicate information, to take account of his hearer's state of knowledge, to tell him what he needs to know, and not to assume that he knows more than he can reasonably be expected to know or to have inferred.

There is only time to mention one aspect of this skill in any detail today. It is the speaker's ability to identify what he is talking about at any particular time, to construct a helpful referring expression, and to maintain the distinct identify of each referent.

Suppose the speaker has in front of him a cartoon strip story, which involves a woman, a man and a car, which he has to relate to his classmate, sitting on the other side of the table, in order that the classmate can do some task relating to the story. The problems of reference in this story are minimal. There are gross category differences to help the initial identification, and the pronouns *he*, *she* and *it* will uniquely identify the participants when they are referred to subsequently. A more difficult task would be a story which involves a woman and two men. Here the initial identification has to distinguish between the two men. If each is referred to as *a man*, or, even worse, as *the man*, the listener is going to have problems of identification. If, as the story proceeds, both men are subsequently referred to as *he*, it will be hard for the listener to know which of them is being referred to. A still more difficult task would be where three same-gender members of the same category are involved. Suppose the student is shown a television clip of an accident involving three cars, and he has to tell the hearer about it, as it were to an insurance agent who is completing details on a form. Here he has to make an initial identification of each car, attaching a uniquely identifying predicate to each individual, and then he must maintain distinct reference to each car. He may refer to one, currently being described, as *it*, but when another car enters or re-enters the action, it must be reintroduced with its identifying description. That sort of task is quite difficult for any of us, even if we're prompted with stills from the television clip to reduce the memory load. If there are four cars involved, the task becomes more difficult still. It seems then that we have a possibility of grading tasks in terms of referential difficulty. It seems that we could teach and practice control of simple tasks, as I have defined them with respect to this criterion, before proceeding to more complex tasks.

The problem of establishing and maintaining reference is, of course, one which comes up in any type of task indeed in all communication. Where one student, who knows how to assemble an electric mincer (and has a set of photographs in front of him, to remind him how to do it), is instructing another how to do it, the very same problem is encountered. The speaker has to identify each piece and attach it correctly to other pieces. The speaker's ability to make clear what it is he is talking about is a quite fundamental linguistic ability. It seems reasonable to suggest that the ability to control reference in a long transactional turn is a proper part of communicative competence. This ability certainly discriminates between members of the population we have been studying.

I have been insisting on the importance of referential control in long transactional turns. It might appear that the lack of control which I refer to may arise simply because of the artificiality of the imposed task. However, the same lack of control is manifested in long turns in relaxed, largely interactional conversation of our subjects. For example we have one pupil who manages interaction with her interviewer very confidently and cheerfully. They have been talking about the current American presidential elections and that topic has petered out. At this point the pupil introduces her own topic which relates back to the previous discussion:

*G* I watched that film last night – remember that – did you see it (She checks her hearer's state of knowledge as she introduces her own topic. Her hearer hasn't seen the film, so G. tells her what it was about.)

*G* it is eh – it was about eh – the assassination of – President Carter – I think it was

(The slip – *Carter* for *Kennedy* – is not commented on by either participant. After a further interchange, the listener asks G. what went on in the film, thus handing over a long turn.)

*G* well eh you just saw the ashassina-assassination and there was somebody taking the part of what the man had done that got-shot him – eh – that shot him – and they was following all the things – and all that – and then – eh – this other man went and shot him – because he liked the President – and then after that it just ended up that he got took to prison

This is a very incomplete transcription. It is simply to exemplify the sort of problem for the hearer/reader of identifying the referents of the expressions *he* and *him*. It is, of course, true that a highly sympathetic hearer with a knowledge of the film, or of the incident which the film portrays, can work out who the speaker is referring to. It is also true that in primarily interactional speech there is often not very tight referential control. The listener is only doing intermittent sampling and may not be interested in the tight detail of what is being said. We have many examples in primarily interactional speech of adults in our data of vague or non-specific reference and it is very rare for a hearer to comment on this.

In primarily transactional speech, where it actually matters to the listener which referent is being talked about, it is important for the speaker to be able to exercise referential control. A good example of a lack of referential clarity, when it really matters, in a report of a medical case history is to be found in Cicourel's data:

> *But, he mentioned prior to this, that if there was anything, and I don't know why, we were talking about if there was anything. This, what, as Dr. B. brought up. I stopped to think why was that brought up;*
>
> (Cicourel, this volume, p. 80, Fig 5, lines 20–2)

In a highly industrialised society, where many aspects of life touch on bureaucratic institutions, it is a necessary accomplishment for a speaker to be able to make clear, in a controlled and efficient manner, what he wants to say, when he has to speak to someone who is busy or under pressure of time. Many young native speakers of English find this difficult, even when the referential task is relatively simple. It is a difficulty which is not confined to pupils at the bottom of the academic ability range – we have found some members of the top ability group, measured in academic terms, who also have difficulty with a relatively simple task. If this is true for native speakers, speaking their own language, it seems reasonable to suppose it may be true for speakers of other languages both in speaking their native languages and in speaking foreign languages. Referential control is, I believe, an ability which could be, and needs to be, trained. Note that this suggestion is made within a very limited context. I am not suggesting that referential control in primarily interactive speech should be trained – only control in primarily transactional speech. It is only when the message is important that the speaker needs to communicate it particularly clearly. Similarly I am not suggesting that it is necessary to teach highly literate forms of language in order to control reference. Adolescent native speakers have quite sufficient control of language categories, in terms of syntax and vocabulary, to control reference. Lastly, I am suggesting that it is particularly important to train this ability in long turns, since it is particularly in long turns that inadequate control is manifested.

### *2.vii Other features of transactional tasks*

I have outlined rather briefly a way in which we might attempt to investigate referential control as a feature of communicative competence (for a fuller discussion cf. Yule and Smith 1981). Different types of task will clearly throw up different sets of features which need to be controlled in the language the student produces. Consider temporal structure in a narrative: in a narrative which has a simple temporal structure, one event follows another within one time-span. However a more complex temporal structure will contain a jump forward in time, or a flashback, or two actions happening simultaneously. In a descriptive task, it may be necessary to specify the spatial relationships of objects with respect to each other. The more objects there are, and the more complex their set of inter-relationships, the harder the task is for the speaker. It is a cognitively more difficult task and the cognitive difficulty shows up in the instrument of communication, the language.

By analysing what information in each task needs to be conveyed, we should be able to construct an index which indicates the relative difficulty of a particular task with respect to a particular feature. What we hope to do is construct a bank of tasks, indexed in a way which would enable a teacher to test a pupil, say, on a task with a medium difficulty rating for reference and, if he has difficulty with it, back down until the level of difficulty he can cope with is discovered, and then give him specific training in preparation for the next level of difficulty.

I said earlier that it has been customary to assess a student's ability to produce long transactional turns impressionistically. This means it is very difficult for a teacher to know how to help a student improve his performance. If we were to take a more analytic view of the communicative skills involved in different types of tasks where the transfer of information is primarily at issue, it ought to become possible to teach those skills systematically. We ought to be able to construct courses which begin, for instance, with quite simple referential tasks and gradually increase the referential complexity. We should perhaps take more seriously the *teaching* of the control of long turns in speech.

No-one, certainly not me, is going to claim that this approach touches on the question of communicative competence in other than a limited way. Within its limited terms, however, I believe that it does actually touch on that issue. I believe that it touches, too, on a larger, fairly unfashionable issue. To indicate just how unfashionable the view that I take is, I shall express it in words quoted at the beginning of Lindley Murray's *English Grammar adapted to the different classes of learners* written in the first half of the nineteenth century:

> "They who are learning to compose and arrange their sentences with accuracy and order, are learning, at the same time, to think with accuracy and order."

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# TYPOLOGICAL FEATURES OF BALKAN LANGUAGES AND THEIR PEDAGOGICAL CONSEQUENCES

1. Linguists nowadays agree that the assessment of interferences between two or more than two languages have both applicative and theoretical reflexes. The former come out in new foundations for foreign language teaching materials, in new ways of presentation of individual teaching items and in revised organization of the classes themselves (Filipović 1971). The latter are generally thought to have imprints in formulating the theoretical principles of applied linguistics and in providing a more reliable empirical basis for underlying structures that, in their turn, serve as *tertium comparationis* for inter-language contrasts. Typological studies are usually judged to have little give and take with either of these reflexes. In what follows we shall attempt to show that this judgement is not justified.

1.1 Our reasoning will start with a discussion of the Macedonian, Serbo-Croatian and Turkish deictics – grammatical elements with which Europeans learning these languages have difficulties. We shall argue that those difficulties are attributable to more than one relationship between what we may call common European and Balkan[1] lexemes with built-in spatial distinctions: while most European lexemes of this type are pairs that reflect more or less simple binary oppositions, their Balkan counterparts are triplets. Linguists concerned with the problem (e.g. Topolinska 1974) have been endeavouring to fit these triplets into the two ordered pairs of oppositions of [± presence] and [± proximity]. These endeavours are, however, highly motivated by the patternings of the deictics in the respective linguists' native languages.

1.2 Incompatibility between the pattern of the native language of the descriptor and that of the language described is the basis for inadequate treatment of another Balkan feature: the reporting modality of the verb. We shall try to show that the verbal systems of some Balkan languages are typologically specific and that many errors in foreign language learning are attributable to this specificity. Our arguments will be supported by some sociolinguistic considerations.

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[1] It is customary in Balkan linguistics to label as 'Balkan' any feature that appears in more than two Balkan languages.

1.3 Having established a close connection between the typological features of the Balkan languages and foreign language learning errors, we shall try to recycle our findings and indicate how they could be used for pedagogical purpose.

2. The deictic terms in a group of Balkan languages, Macedonian, Serbo-Croatian and Turkish, appear in triplets that correspond to the three personal pronouns.

2.1 In Macedonian, there are six such triplets:

| (1) | proximate to: | 1st person | 2nd person | 3rd person |
|---|---|---|---|---|
| | *a* | *-ov*[2] | *-ot* | *-on* |
| | *b* | *ovoj* | *toj* | *onoj* |
| | *c* | *vak-*[3] | *tak-* | *onak-* |
| | *d* | *olk-* | *tolk-* | *onolk-* |
| | *e* | *ovde* | *tuka* | *onde* |
| | *f* | *vamu* | *tamu* | *onamu* |

2.11 The items in (1)a are the simplest deictic terms; they appear as postpositive articles attached to the first element of the noun phrase. The items in (1)b, in their turn, function as demonstrative determiners or pronouns: The uses of (1)a and (1)b are, as a matter of fact, parallel:

| | | | | | | |
|---|---|---|---|---|---|---|
| (2) | *a* | Kupi | mi | ja | vazna*va!* | |
| | | buy (imper.)[4] | me (dat.) | her | vase the (prox. to 1st p.) | |
| | | 'Buy me this vase!' | | | | |
| | *b* | Kupi | mi | ja | *ovaa*[5] | vazna! |
| | | buy (imper.) | me (dat.) | her | this | vase |
| | | 'Buy me this vase!' | | | (f.) | |

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[2] All items are rendered in Latin script; *š* and *j* in the transcription of the Slavonic languages are equivalent to *ş* and *y* in Turkish, respectively. The variations result from traditional practice. The prepositive dash denotes obligatory concatenations. Formal variations reflecting gender and number agreement are given only when the items appear in context; otherwise, only the form representing masculine gender, singular number, is quoted.

[3] The postpositive dash marks the placements of obligatory derivational suffix (*vak-* + *-ov* = *vakov*, 'this kind' (adj.m.s.); *vak-* + *-a* = *vaka*, 'in this way' (adv.)).

[4] Only the grammatical features not rendered by the English translation are listed.

[5] The determiners express gender agreement with the nominal head. Nevertheless, we shall not be concerned with it; morphonological rules are beyond the scope of this paper.

The Macedonian article triplet is actually the unmarked counterpart of the determiner triplet of that language[6]. The relationship of *-ov* to *ovoj*, *-ot* to *toj* and *-on* to *onoj* is comparable to the relationship of the pronominal clitics *mi, ti, mu* to the possessive determiners *moj* 'my', *tvoj* 'your', *negov* 'his', illustrated by paris like:

(3) *a*

| | | | | |
|---|---|---|---|---|
| Petko | *mi* | ja | skrši | rakava. |
| Petko | me (dat.) | her | broke (3rd p.) | hand the (prox. to 1st p.) |

'Petko broke my hand'.

*b*

| | | | | |
|---|---|---|---|---|
| Petko | ja | skrši | *mojava* | raka. |
| Petko | her | broke (3rd p.) | my (f.) the (prox. to 1st p.) | hand |

'Petko broke my hand'.

We have shown elsewhere (Tomić 1978b) that the latter relations can successfully be handled by communicative sentence perspective, and we have strong reasons to believe that the article/determiner distinction in Macedonian can be handled analogously.

2.12 The items in (1)c, (1)d, (1)e and (1)f are qualitative or modal, quantitative or sizal[7], locative and directional, respectively. Generally speaking, all of them can have both adnominal (adjectival) and adverbial functions, though with appropriate morphonological adjustments:

(4) *a*

| | | | | | |
|---|---|---|---|---|---|
| Bi | sakala | da | imam | *onakva* | šapka. |
| (I) would | like (active partic. f.) | to | have (1st p.s.) | like that (prox. to 3rd p.) | hat |

'I would like to have a hat like the one over there.'

*b*

| | | | |
|---|---|---|---|
| Bi | sakala | šapkata | da |
| (I) would | like (active partic. f.) | hat the | to |
| izgleda | *onaka.* | | |

---

[6] Topolinska (1979) refers to the Macedonian articles as "clitical variants of the demonstrative pronouns".

[7] Note that the quantitative or sizal spatial terms appear in two adjectival and two adverbial sets of lexemes:

a. Adj. *olkav, tolkav, onolkav*
   Adv. olku, tolku, onolku
b. Adj. *olkačkav, tolkačkav, onolkačkav*
   Adv. *olkučka, tolkučka, onolkučka*

While the sets in a. are neutral, the ones in b. infer smallness.

| | |
|---|---|
| look (3rd p.s.) | like that (prox. to 3rd p.) |

'I would like the hat to look like that'.

| | | | | |
|---|---|---|---|---|
| *c* | Detevo | e | rodeno | *ovde*. |
| | child the (prox. to 1st p.) | is | born (n). | here (prox. to 1st p.) |

'The child was born here'.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *d* | Ovde*šnovo* | | dete | ne | znae | da | pliva. |
| | here (poss.) | the (prox. to 1st p.) | child | not | know (3rd p.s.) | to | swim |

'The child that comes from here doesn't know how to swim.'

Yet, (1)e and (1)f are predominantly "cut out" to be adverbs.

2.2 In Serbo-Croatian, the number of deictic triplets that express spatial relation of proximity to the first, second or third person also ammounts to six:

| (5) proximate to: | 1st person | 2nd person | 3rd person |
|---|---|---|---|
| *a* | *ovaj* | *taj* | *onaj* |
| *b* | *ovak-* | *tak-* | *onak-* |
| *c* | *ovolik-* | *tolik-* | *onolik-* |
| *d* | *ovde* | *tu* | *onde* |
| *e* | *ovamo* | *tamo* | *onamo* |
| *f* | *ovuda* | *tuda* | *onuda* |

The items in (5)a–e correspond to the Macedonian (1)b–e items, respectively. The items (5)f refer to the path. The (5)d–f items, as a matter of fact, form a perfect paradigm of the spatial relations of location, direction and path.[8]

2.3 In Turkish, there is one triplet of morphologically and semantically simple lexemes exhibiting spatial relations of proximity to the first, second and third person: *bu*, *şu* and *o*, respectively. In addition, there are four triplets of complex deictic terms:

| (6) proximate to: | 1st person | 2nd person | 3rd person |
|---|---|---|---|
| *a* | *bunu* | *şunu* | *onu* |
| *b* | *boyle* | *şoyle* | *oyle* |
| *c* | *bukadar* | *şukadar* | *okadar* |
| *d* | *burada* | *şurada* | *orada* |

---

[8] In addition to the above triplets, Serbo-Croatian has the triplet *sada*, *tada*, *onda*, which expresses temporal relations. Since movement in time can be compared to movement in space, the members of this triplet might be treated as implicitly spatial. The relationship between *sada*, *tada* and *onda*, however, differs from the relationships between the first, the second and the third members of the triplets in the above tables. *Sada* refers to the moment of speaking, but *tada* and *onda*, indiscriminately, or almost so, refer to moments preceding it.

While the simple deictics function as determiners, the complex terms in (6)a, (6)b, (6)c and (6)d are genuinely demonstrative, qualitative, quantitative or sizal, and locative[9], respectively.

2.4 Grammarians are tempted to extend to the Balkan spatial triplets the distinctions between general and specific spatial terms, existing elsewhere in Europe.

2.41 Indeed, in French, *celui-ci* and *celui-là* are the respective proximate and distant members of a pair of spatial terms which makes specific the general deictic term *celui*. Or, in Czech, *onen* is used only in contexts in which the opposition *ten*/*onen* is made; otherwise, *ten* is the only eligible demonstrative determiner. Spanish does have three demonstrative determiners/pronouns: *este, ese* and *aquel;* but, while the first two denote proximity to and distance from the speaker, respectively, the third one is predominantly used for reference to non-present objects. Unlike the deictics of many European deictic systems, each Balkan spatial term can be used independent of contextual opposition and can have a positive index for the possible feature [± presence]:

(7) M. *a* Dete*vo* mi e bolno
child the (prox. to 1st p.) me (dat.) is sick (n.s.)
'My child is sick'.

*b* Go gledaš sonce*no?*
it (acc.) see (2nd p.s.) sun the (prox. to 3rd p.)
Neli ti rekov deka
didn't you (dat. s.) told (1st p.s.) that (conj.)
ǩe izgree?
will come out (3rd p.s.).
'Do you see the sun? Didn't I tell you it would come out?'

*c* Imate li ušte edna *takva* šapka?
have (2nd p.p.) (inter. particle) more one (f.) such (prox. to 2nd p., f.) hat
'Do you have another hat like that?'

*d* Molivot ǩe go najdeš *onde*
pencil the will him (acc.) find (2nd p.s.) there (prox. to 3rd p.)

---

[9] No distinction between location, direction and/or path is exhibited.

| | |
|---|---|
| pod | skali*ne*. |
| under | stairs the (prox. to 3rd p.) |

'You will find the pencil over there, under the stairs.'

SC. *a*

| | | | | | |
|---|---|---|---|---|---|
| *Ovi* | rezultati | treba | da | te | zadovole. |
| these | results | should | to | you (acc.) | satisfy (2nd p.p.) |

'These results should satisfy you.'

*b*

| | | | |
|---|---|---|---|
| Devojka | je | prošla | *onuda*. |
| girl | is | walked (active partic. f.s.) | there (prox. to 3rd p.) |

'The girl walked over there.'

*c*

| | | | |
|---|---|---|---|
| *Toliko* | sladoleda | nikada | nisi |
| That much (prox. to 2nd p.) | ice-cream (gen.) | never | not be (2nd p.s.) |

| | | |
|---|---|---|
| imao | pred | sobom. |
| had (1st p.s.m.) | in front of | yourself (refl. abl.) |

'You have never had as much ice cream in front of you!'

2.42 In speech or in writing man often refers to objects which are beyond the range of the human senses as well as to objects the spatial coordinates of which are irrelevant. For such reference, Macedonian uses the article, the determiner and the adverb of direction that otherwise relate to the addressee:

(8) *a*

| | |
|---|---|
| Dojde | čovek*ot*. |
| came (3rd p.s.) | man the |

'The man came'.

*b*

| | | | |
|---|---|---|---|
| *Toj* | gest | me | nasmeja |
| that | jest | me (acc.) | set to lough (past tense, 3rd p.s.) |

'That jest made me lough'.

*c*

| | | |
|---|---|---|
| *Tamu* | nemaše | nikogo. |
| there | not had | nobody (acc.). |

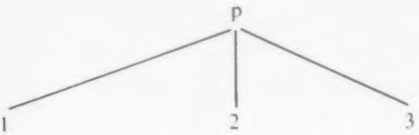
'There was nobody there.'

This use might be taken as a support for an analysis that distinguishes between general and specific deixis. But, if *-ot, toj, tamu* are treated as general deictic terms, the remaining members of the respective Macedonian deictic triplets should establish as proximate or distant previously unspecified spatial distinctions, which they do not; *-ov*, *ovoj* and *vamu* denote proximity to the speaker and distance from the addressee while *-on*, *onoj*, *onamu* denote proximity to animate or inanimate concrete or abstract objects that are remote from both the speaker and the addressee.

2.43 Students of Macedonian have been basing their analyses of the deictics on the ordered pair of oppositions [± present], [± proximate] (Topolinska 1974). Indeed, the Macedonian *t* deictics are unmarked and the *v* and *n* ones are marked for "presence", since the former are used for reference to both "present" and "non-present" objects while the latter two are reserved for reference to objects within the range of some of the senses of the speaker.[10] But if the features [± present], [± proximate] are ordered as listed and the latter are made contingent on the positiveness of the former, the fact that the *t* deictics are used for reference to objects proximate to the addressee can not be captured. If ordering is reversed, many more facts are left out.

2.5 The analysis of the deictics of the three Balkan languages considered reflects closely the relationship of their respective personal pronouns and can be expressed by the graph:

(9) $R_{space_b}$



where: p = proximate
1 = speaker
2 = addressee
3 = animate or inanimate object remote from both the speaker and the addressee

and the formula:

(10) $R_{space_b} = p(x)$
where: p = proximate
x = variable that ranges over 1, 2 and 3.

2.51 In all the three languages considered, the branches 1, 2 and 3 can be lexicalized with lexemes that express proximity to the speaker, addressee and a third referent (an animate or inanimate, abstract or concrete object, remote from both the speaker and the adressee), respectively. Yet, in each of them the lexemes produced by some of the branches can also be used for reference to objects whose spatial coordinates are irrelevant. In Macedonian such are the lexemes that can also refer to objects close to either the speaker or the addressee and in Serbo-Croatian either the lexemes that also refer to objects close to the addressee or the ones that also refer to objects remote from both the speaker and the addressee. Note:

---

[10] So, spatially related are not only objects which are phisically distant or close. The term "spatial" also refers to temporal and emotional relations.

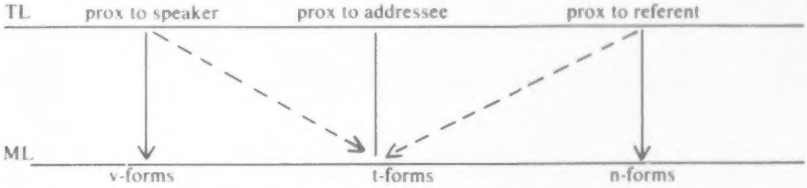
(11) SC. *a* *Taj* stan vam se
that (otherwise prox. to 2nd p.) flat you (dat.) (refl. particle)
neće dopasti.
not will please
'You won't like that flat'.

*b* Došao je *onaj* čovek.
come (active partic. m.s.) is that (otherwise prox. to 3rd p.) man
'The man came.'

2.52 Consequently, in each of the three languages considered the general Balkan relationship of the deictics (represented in (9) and (10)) is modified. In Macedonian, the second member of the triple is unmarked while the first and the third are marked. In Turkish, the third member is unmarked and the first two are marked. In Serbo-Croatian the second and third member are alternatively unmarked. Graphically, these relationships can be represented with the following ternary trees.[11]

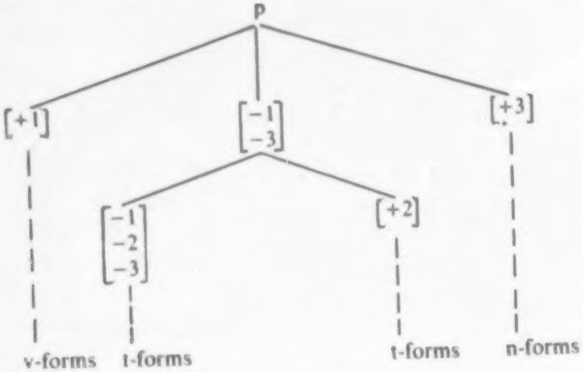
---

[11] Panevová (personal communication) remarked that the ternary system could well be fitted into the functional generative model of Sgall et al. (Panevová 1980; Sgall & Hajičová 1971; Sgall & Panevová 1976). In that model, the semantic relations of proximity to speaker, addressee and third referent would be represented at the tectogrammatical (semantic) level and realized by special forms at the morphonological level. At the same time, the relations which are represented by forms that are not unmarked would be realised through a secondary relation. For Macedonian, these representations would be as follows:

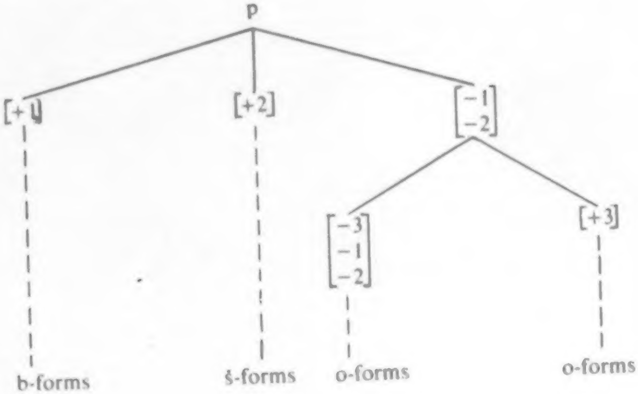


The forms produced by more than one arrow are unmarked.

(12) *a* $R_{\text{space}_m}$:

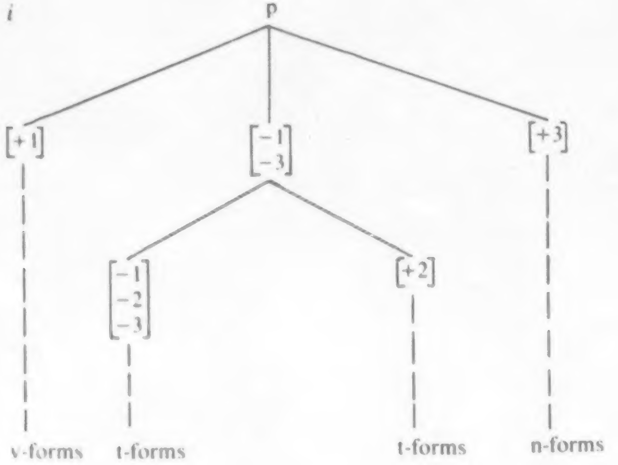


*b* $R_{\text{space}_f}$:

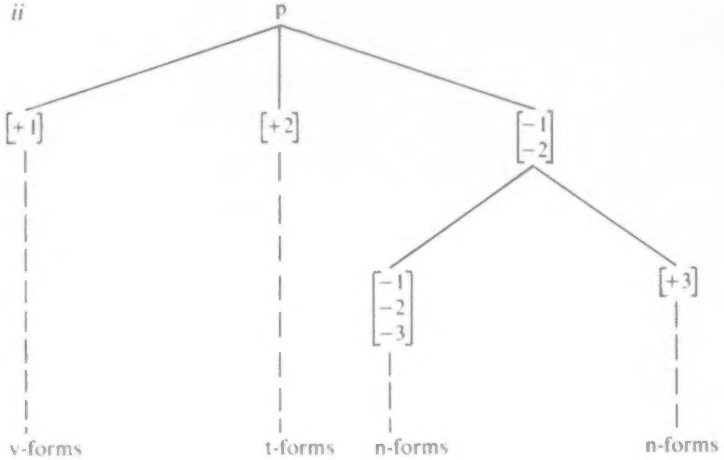


*c*

*i*

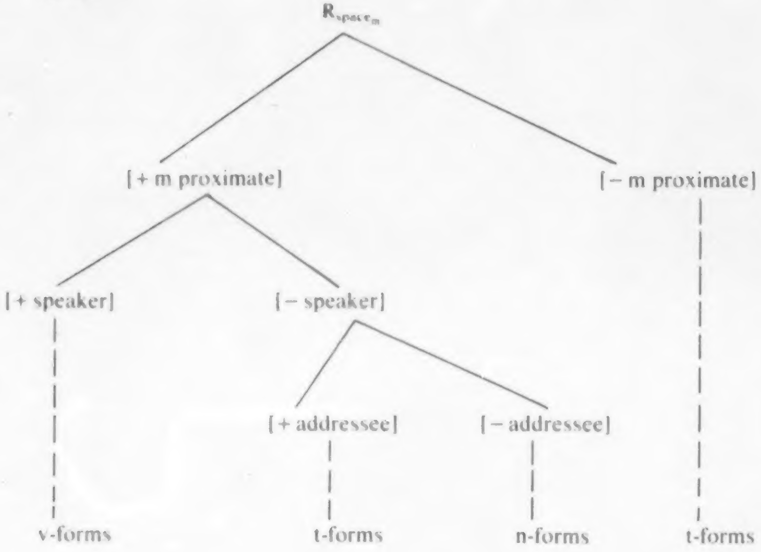


*ii*



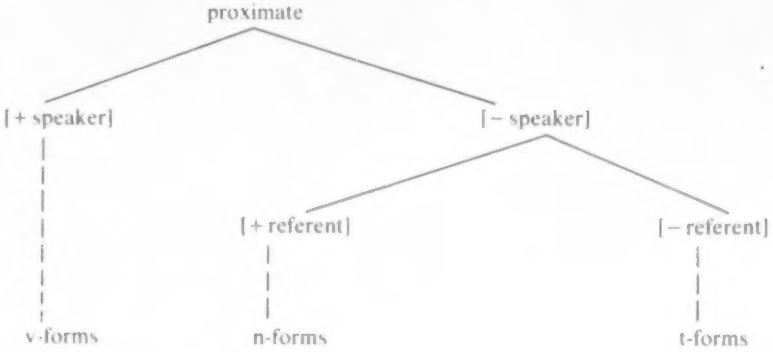
2.53 The ternary relationships of proximity to the speaker, addressee and a third referent can of course be reduced to combinations of binary representations. We can start with the distinction [± m proximate] and then procede to the features representing the speaker, addressee and the third referent:

(13) $R_{space_m}$:



Or else, we can order the features so as to deduce the unmarked member of the tripple by following the negative branches of the binary oppositions:

(14) $R_{space_m}$:

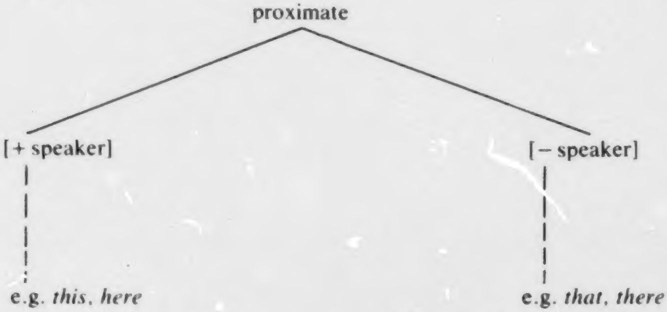


These representations are undoubtedly perceptually elegant. But the ordering of features is highly dependent on the surface realizations and the positing of the intermediate nodes is not substantiated. Moreover, the representations in (12) reflect the fact that the unmarked exponent is formally identical and intuitively related to one of the exponents expressing relationship to one of the personal pronouns; the representations in (13) and (14) do not do this.

2.6 Whatever the representation, the relationships of the Balkan spatial terms are basically different from those of the spatial terms in the majority of the Indo-European languages.[12]

2.61 The English counterpart of (12) would be a binary relation of positive or negative proximity to the speaker, with the negative branch unmarked:

(15) $R_{space_e}$:



In German and Russian the relationships would be same as in English, whereas in Polish it would be the member proximate to the speaker that is unmarked.

2.62 In Slovenian, a South Slavonic, though not Balkan language, there exists the deictic pronominal (determiner) triplet:

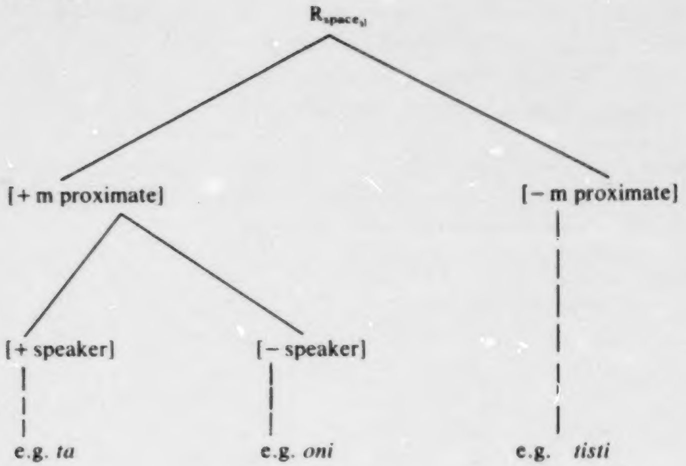
(16) *ten, tristi, oni*

This triplet, however, is both morphonologically and semantically different from the triplets in Macedonian and/or Serbo-Croatian. The first member, *ta*, denotes proximity to the speaker, while the second and third members, *tisti* and *oni*, express distance from the speaker, with *tisti* predominantly reserved for reference to objects whose spatial coordinates are irrelevant. The relationships of the deictics in this language would rest upon two ordered binary sets of oppositions: [± m proximate] and [± proximate to speaker]:

---

[12] The deictic systems of the other Balkan languages (Greek, Bulgarian, Romanian, Aromanian and Albanian) participate in the Common European pattern; all of these languages have deictic couples that are positively or negatively proximate to the speaker, with the negative member unmarked.

(17) $\mathbf{R}_{\mathrm{space}_{sl}}$



The relationships in Spanish and French would be similar. In the latter language, one should note, the contrast between the [+ m proximate] and the [− m proximate] members is very adequately morphonologically represented (compare *celui* to *celui-ci* and *celui-là*).

2.63 Though not insignificantly different from the patterns of English, German, Russian or Polish, the patterns of the relationships of the deictics in Slovenian, Spanish and French still participate in what we might call a European pattern, where the unmarked element is both semantically and formally juxtaposed to the marked one(s). This pattern is typologically quite distinct from that found in the deictic systems of the three Balkan languages considered, and it is precisely this distinctness that is the cause of many learning errors. But we shall take up the discussion of these errors after we have considered another typologically distinct Balkan characteristic – the reportedness of the verbal system.

3. Traditional accounts of the evolution of the past tense systems in Bulgarian and Macedonian state that under the influence of the Turkish *miş*-past, forms descending from the Common Slavonic perfect, equivalents of *be* + active participle, have taken on the meaning "reported".

3.1 While in Macedonian there is a single set of "descendants" throughout the system, in third person, singular and plural number of Bulgarian we have two alternants, one with the auxiliary *səm*, 'be', and another without. Since the forms with *səm* are often used with the meaning of past indefinite, while those without tend to be "reporting", normative accounts of Bulgarian grammar have been establishing an opposition between the "past indefinite" (also called "perfect") and the "past reported", consisting of the omission of the third person auxiliary in the latter. On the basis of this omitted auxiliary, most scholars have posited two, entirely separate, complete paradigmatic sets of past indefinite and reported forms. These sets have been parallelled with the Turkish *miş + dir* and simple *miş* sets, respectively. Accordingly, for the equivalents of *write*, Bulgarian *piše*, Turkish *yazmak*, we would have the following paradigms:

| | | | | |
|---|---|---|---|---|
| (18) | B. | | past indefinite | past reported |
| | | 1st p.s. | *pisal səm* | *pisal səm* |
| | | 2nd p.s. | *pisal si* | *pisal si* |
| | | 3rd p.s. | *pisla e* | *pisal* |
| | | 1st p.p. | *pisali sme* | *pisali sme* |
| | | 2ns p.p. | pisali ste | pisali ste |
| | | 3rd p.p. | pisali sə | *pisali* |
| | T. | | *miş + dir* past | *miş* past |
| | | 1st p.s. | *yazmişimdir* | *yazmişim* |
| | | 2nd p.s. | *yazmişindir* | *yazmişin* |
| | | 3rd p.s. | *yazmiştir*[13] | *yazmiş* |
| | | 1st p.p. | *yazmişiktir* | *yazmişik* |
| | | 2nd p.p. | *yazmişinizdir* | *yazmişiniz* |
| | | 3rd p.p. | *yazmişlardir* | *yazmişlar* |

3.2 Recent students of the Balkan languages have been bothered by the existence of two sets which are ascribed different functions but differ formally only in the presence of absence of a morpheme in only one person. The more so since there have been many "exceptional" uses of the forms with those morphemes for reporting and the ones without them for non-reporting pasts. In his endeavours for a more adquate explanation, Friedman (1978) posits one set of composite past forms which are in opposition to the simple past forms. He claims that the composite Bulgarian (as well as Macedonian) past forms are not marked for a feature of the type "reported", "unwitnessed", "deduced" etc. but rather that the Bulgarian and Macedonian simple pasts, along with the Turkish *di* past, are marked for affirmation and this marking is responsible for the nonaffirmative chief contextual variant meaning of the other pasts, which must then be treated as unmarked or unmarkable. Rather than definite and indefinite, Friedman labels the two respective opposed forms affirmative and nonaffirmative and classifies them as exponents of the category of status, where status is "the evaluation of the narrated event" (Aronson 1977:14).

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[13] The morphonological variants are the result of consonant and vowel hamony.

3.2 We shall not discuss the justification of the use of the term 'status' (though one should note that the authors have placed both the definition and its label in the context of the definitions and the labels for other grammatical categories). It should, however, be pointed out that the context which serves Friedman to "clearly" set off affirmation, the context of doubt or disbelief, welcomes past definite as much as "antiaffirmative" forms. Native speakers of Macedonian and Turkish accept without hesitation the following sentences which Friedman claims to be unacceptable:

(19) M. Se somnevam deka toj go
(refl. particle) doubt (1st p.s.) that (conj.) he it (acc.)
*napravi* toa.
did (3rd p.s.) it
'I doubt that he did it.'

T. Inanmiyorum ki o adam
believe not (present, 1st p.s.) that (conj.) that (det. prox to 3rd p.) man
bunu *yapti*.
this (pro, prox to 1st p.) did (3rd p.s.)
'I don't believe that the man did it.'

So, the category of status, as defined by Friedman, rests on shaky grounds. We shall now argue that no unique category solves the problem.

3.4 Rather than insist on uniformity and try to draw general conclusions, which hold for all the three Balkan languages considered, one should treat the feature of reporting within each of the verbal systems of Turkish, Bulgarian and Macedonian separately.

3.41 In Turkish, the affix *miş* is the exponent of the feature of reporting which, being morphonologically signalled, may be characterized as belonging to a spçcial type of reporting modality, where modality is defined as a category representing the relation of the speaker towards the factual standing of what is being said. When *miş* cooccurs with *dir*, the reporting is not cancelled (as alleged by Friedman 1978); the verbal expression simply becomes enriched with an additional meaning, that of the particle *dir*.

Followed by *dir, miş* has the value reported-probable: The speaker marks an event as reported but at the same time expresses a belief that it has taken place. Compare:

(20) *a* Böyle seyler *gördük*
this kind (prox. things see (past simple,
to 1st p.) 1st p.p.)
'We have seen such things.'

*b* Böyle seyler *görmüştük.*
this kind (prox. things see (past reported,
to 1st p.) 1st p.p.)
'We are said to have seen such things.'

*c* Böyle seyler *görmüştükdür.*
this kind (prox. things see (past reported,
to 1st p.) probable, 1st p.p.)
'We have, as reported, probably seen such things.'

The apparent inconsistencies, i.e. the use of reported forms in non-reported contexts and *vice versa,* in their turn, result from a misconception of contextual restrictions. The presupposition for the use of reported or non-reported forms is restricted to the simple sentence governed by the respective verbal expression. So, we have (19) T. or (21) depending on whether the speaker knows or believes that whatever was reported to have been done was done or not.

(21) Inanmiyorum ki o adam
believe not (pre- that the (prox man
sent, 1st p.s.) (conj.) to 3rd p.)

bunu *yapmiş*
this (prox. to 1st p.) do (past reported, 3rd p.s.)
'I don't believe that, as said, the man has done it.'

3.42 In Bulgarian, the forms of the verb *səm,* coupled with the active participle marker *-l,* stand for indefiniteness as well as reportedness (the latter under the influence of Turkish, most probably). Since they contrast with the simple past forms, which are marked as definite, we are justified to treat them as unmarked. The opposition should, however, be that of definite/unmarked for definiteness, rather than affirmative/non-affirmative. The omission of the verb *səm* in the third person is part of a common Balkan Slavonic tendency of optional omission of auxiliaries in emotive context as well as in sentences with two time references (Grickat 1954).

3.43 In Macedonian, we have a specific situation. Influenced by Albanian and Greek, this language has developed an elaborate system for expressing resultative aspect, a grammatical category referring to degree of completion of action relative to the speaker, its exponents being the respective forms of the verb *ima*, 'have', and the passive participle marker *-no*. Since many of the functions of the Slavonic and European "indefinite tenses" have been taken over by these exponents, the *sum + -l* forms, the descendents of the forms of the former Common Slavonic perfect, have been left free to act as agents of reporting modality. The explicit marking of categories not realized in other Slavonic languages has broken the old tense based system (present, past, perfect, future) and has led to a verbal system in which the exponents of the only two tenses, present and past, interact with exponents of aspect (resultative in addition to, and not instead of, the typical Slavonic durative one) and modality (conditional as well as reporting). So, we have expressions which contain exponents of tense and resultative aspect:

(22) *a* Vo toj grad *nemam* *bideno*.
in that (prox. to 2nd p.) town not have (1st p.s.) been
'I haven't been in that town.'

*b* Seušte se *nemam* *zapoznaeno*
as yet (refl. particle) not have (1st p.s.) met (partic.)
so negovata žena
with his the (f.) wife
'I haven't as yet met his wife.'

expressions which contain exponents of tense and reporting modality:

(23) *a* Nie *sme* *bile* pološi
we are (1st p.p.) be (active partic. plural) worse
od niv.
than them (acc.)
'We are said to be worse than them.'

*b* Ne *možele* da te
not can (active partic. plural) to you (acc.)
najdat.
find (completed, 3rd p.p.)
'They say they couldn't find you.'

as well as expressions embodying exponents of tense, aspect (resultative and durative) and modality (conditional and reporting):

(24) Do sega *ke* te *imal*
until now will you (acc.) have (active partic. m.s.)
*naučeno* da plivaš.[14]
teach (completed, passive partic.) to swim (2nd p.s.)
'He would allegedly have taught you to swim by now.'

3.44 Nevertheless, the interaction of tense, aspect and modality exponents is not uniform with all native speakers of Macedonian. Whereas the need for the grammaticallization of reporting appeared throughout the territory of the Macedonian language community, the urge to grammaticalize resultativeness originated in the west and south-west and hardly spread through even Central Macedonia before it was made part of the description of the literary Macedonian language (after the Second World War). Many native speakers of Macedonian are not at ease with the resultative aspect forms and use the *sum* + *-l* signals to denote indefiniteness as well as reportedness. So, we actually have an intersection of two strata of verbal systems: one with present, past definite and past indefinite tense and another with present and only one past tense but with resulative aspect and reporting modality.

3.45 Thus, in Turkish reportedness is a distinct grammatical category with clearly delimited marked exponents, in Bulgarian, it is an integral part of a category with wider scope and in Macedonian it is interchangeably distinct or included. In any case, we have a typological distinction: a semantic notion lexically expressed elsewhere in Europe has been, or is on its way to be, grammaticalized.

4. The Balkan languages have been known to develop sensitivity for grammatical distinctions foreign to non-Balkan languages genetically related to them. Our discussion of the Balkan spatial relations and reportedness, placed in the wider framework of the deictic and verbal systems of the respective languages, makes it possible to deduce that this sensitivity has led to:

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[14] The exponents of individual categories are always ordered as follows: tense, conditional modality, reporting modality, resultative aspect, durative aspect. In (24) we have the following exponents:
tense: present, 0; conditional modality: *ke;* reporting modality: *sum* + *-l;* resultative aspect: *ima* + *-no;* durative aspect: *na-*.

*A* Widening the scope of application of given grammatical categories;
*B* Introducing new features into and restructuring the exponential relationships of existing grammatical categories;
*C* Creating new grammatical categories, morphonologically expressed by devices that have been freed from previous functions.

4.1 The new distinctions in a language result from contacts with another language but depend on the structure of the language in which they take place and on previous or simultaneous contacts with other languages. Therefore, same influences do not always produce same results: a given feature may be introduced within an existent grammatical category in one language and lead to the creation of a new category in another.

4.2 Since the interlanguage contacts are not uniformly spread throughout a given language community, variations of grammaticalization occur even within the same language, thus creating systems which interact and interrelate. Very often these variations are interdialectal but in a language with recent standardization (like Macedonian) the dialectal grammatical systems highly influence the usage of individual categories and structures of the standard, literary language and lead to the creation of subsystems in the standard language itself.

5. Such considerations may appear to be outside the scope of applied linguistics, but failure to count with them is the source of many foreign language learning errors.

5.1 Most European learners of Balkan languages (Macedonian, Serbo-Croatian and Turkish, in this particular case) avoid the use of more than one spatial term in their respective target languages and, when they do use them, the marked/ unmarked relationships are assumed to rest upon the distinction proximate to the speaker/ remote from the speaker. Thus they transfer to the target language the Common European binary pattern unmarked/ marked, proximate to/ remote from the speaker, which is inherent in the language systems of most Europeans, whether their respective native language spatial terms rest on patterns produced by ordering the above two oppositions and making the latter distinction dependent on the positiveness of the former (as in French), or by superimposing the opposition marked/ unmarked upon the opposition proximate to/ remote from the speaker (as in English). Speakers of Macedonian, Serbo-Croatian and Turkish, on their part, would usually have difficulties only in selecting the unmarked exponent of the European deictic systems. These difficulties come as a result of incompatibilities between the selection of the unmarked deictics in the Balkan and the other European languages.

5.2 With reportedness the situation is somewhat different. Even European advanced learners of Macedonian, Bulgarian and Turkish tend to avoid using the forms for reportedness or use them as exponents for indefiniteness, which is often adequate for Bulgarian and sometimes corresponds to practice in Macedonian, but never reflecs the attitude in Turkish. Macedonian and Turkish learners of European languages, on their part, in contexts corresponding to those in which, in their native languages, reported forms are used, usually resort to unmarked (simple) past forms. Advanced learners, however, often contrast the overall verbal systems of the respective source and target languages and use a form which primarily corresponds to some other form in their own language but correlates with the reported forms, in form if not in content, better than the unmarked past. (The Macedonian advanced learners of English for example, tend to use English perfective forms.)

5.21 The case of the Europeans learning the Balkan languages is case three in the Nemser & Ivir table (1969) of relationships between the structures in two given languages, the case of a structure occurring in the language target but not in the language source. Nemser and Ivir claim that the knowledge of the language source will neither inhibit nor facilitate the acquisition of the structure by the learner, who is faced with a problem in total learning. Nevertheless, the use of the exponents of reportedness to signal a category-non-existent in the target language indicates that the reactions of the learners are influenced by the language source via typological inferences for possible functions and corresponding forms for their expression. This indication is also supported by the contrasting of the verbal systems of the source and target languages on the part of advanced Macedonian (and Turkish) learners of other European languages and their selection of correlators for the reported forms in their own languages.

5.3 Filipović (1974) notes that investigations in Zagreb have specified the following causes for foreign language learning errors:

*A* Interference from the native language.
*B* Incorrect analogies which a learner tries to establish within the foreign language.
*C* Interference from knowing or learning another foreign language.
*D* Use of inadequate teaching methods.
*E* Propensity to give up the system of one's own language system without having mastered the system to replace it.

Our considerations in connection with the spatial terms and reportedness add another cause: typological inferences. Consequently, the list of correlatives for Filipović's compromise system, consisting of all the deviations from the norm of the target language which occur when a learner passes from the system of his mother tongue to the system of the target language, could be extended to include another parameter – the findings of typological analysis.

6. The use of typology in foreign language teaching and learing presupposes a certain knowledge of the elements of the foreign language(s) that take part in a given typological system and is, therefore, out of place when teaching beginners. But it could be quite effective with relatively mature learners who (a) know, have been learning or are learning at least another language in addition to the target language in question or (b) are acquiring the foreign language in a class in which there are native or near-native speakers of at least two languages (other than the foreign language learnt).

6.1 If conditions (a) and/or (b) are satisfied and we are faced with learners at a level of learning when mechanical drills are dropped and combinatory exercises introduced (high-school level in most European countries), typological considerations are well in place and should be made use of through well selected oral and written exercises. The oral exercises can be dialogues centered around situations which make possible the use of all the exponents of a typological system. They should be carried on in the native or near-native language(s) with consecutive renderings in the foreign language learnt. Subsequently, individual key expressions may be translated into other foreign languages known by the students. The written exercises can be native to foreign language translations of passages which include a variety of exponents of a typological system. They can also be followed by translations into other foreign languages. When the oral and written performances are discussed, the key expressions in each language are organised in tables which make possible typological groupings and contrasts.

6.2 With university students, an appropriate selection of oral and written exercises could serve as an introductor for a theoretical discussion of the typological systems underlying the relationships of the exponents of a certain category in the source language and the target language. Depending on the general linguistic knowledge of the students, these discussions could involve feature analysis (of any of the types presented in this paper) and any formalization to which the students have been introduced.

Not long ago, foreign language teaching was taken to be a trade immune to the analyses of theoretical linguistics. Then, one by one, quite a number of theoretical investigations proved to be relevant for developing adequate methods of teaching. Typological considerations are not as yet among that number. But, hopefully, the present paper has pushed them a step closer to it.

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# DISCOURSE ANALYSIS AND LANGUAGE LEARNING

Summary by the moderator, Evelyn Hatch
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Claus Faerch, University of Copenhagen
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## Part I

## Discourse analysis: Six fields of research

The topic of the symposium was discourse analysis and language learning – a topic which has gained incredible importance in the last few years. Fully one-third of the papers at the Congress and several of the plenaries were directly related to this topic. With so much said about it, discourse analysis cannot be a new field to any applied linguist. Yet, it *is* a difficult field to define.

If we examine the research on discourse analysis, we see that it can be divided into roughly six fields. These six fields include studies important to both theoretical and applied linguists.

First, linguists have realized that syntax (sentence syntax) cannot be understood without reference to discourse (cf. Givon 1979). Beginning with earlier work on topic-comment, theme-rheme, or the given-new distinctions which gave psycholinguists new insights into sentence comprehension, linguists have moved on to an understanding of how discourse uses syntax to make parts of the discourse stand out in foreground and other parts fade into

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relative obscurity in the background. Tense/aspect, pronominalization, the article system and many other parts of the syntactic system can only be understood given this new perspective. In addition, linguists (cf. Celce-Murcia 1980) have shown how the study of discourse context allows us to discover when and why one syntactic form among several seemingly synonymous forms is selected by the speaker/writer. While the research in this first area has been done mainly by theoretical linguists, surely it is important to the applied linguist as well. The findings of the research should strengthen pedagogical grammars, improve language textbook materials, and better inform the classroom teacher.

Second, the study of the *amount* of syntactic organization required in highly planned written discourse versus that required for the loose almost asyntactic form of the most unplanned spoken discourse has opened another field of discourse analysis research – a study of the continuum from planned to unplanned discourse. The differences listed by Ochs (1979) and reviewed by Brown in her paper at this Congress (p. 166) show the importance of considering the place of any discourse sample on this continuum. Again, such research is important to applied linguistics in the areas of evaluation (as pointed out by Swain in her plenary address, p 15), and in identifying samples drawn for second language research. Clearly, it makes little sense to investigate the usage of complex, highly elaborated syntactic form using samples where unplanned spoken discourse forms are most appropriate. Conversely, we should not expect to find unplanned, less tightly compacted discourse when samples of revised written data are collected. It is also clear that second language learners may show varying abilities to use tight or less highly organized syntax according to the needs of the discourse context. The familiar complaint that adult language learners use 'textbook-sounding speech' in informal interactions and the degree of formality signaled by such speech exemplifies this problem. The inability of children in some bilingual programs to use tightly organized syntax in highly planned written discourse (while showing strong skills in informal, unplanned discourse) illustrates the opposite side of the scale.

A third area is the study of large speech events. These include conversational analysis (even bribery conversations as exemplified in Shuy's plenary address, p. 33), interview analyses, the analysis of narratives, procedural discourse and other genres of spoken and written text. Our attempts to describe the systems underlying these large discourse units (cf. Sachs et al. 1978) have led not only to descriptions of the requirements of discourse for communication (Goffman 1976) but to the study of cohesion within each of these large speech events.

Growing out of the work on lexical collocation of Fillmore (1970), Andras

(1977) and others which looked at cohesion within the sentence, researchers such as Halliday and Hassan (1976) have turned to intra-sentential cohesion in larger text. If the current work on procedural grammars (or other lexically driven grammars) is successful, this work on collocation and cohesion in text may give a tremendous boost to our theoretical understanding of grammatical systems. Without doubt, the descriptions of the structure of conversations, of interviews, and of spoken and written text are of extreme importance to the applied linguist as well. Again, contributions to pedagogical grammars, to teaching materials, and to teacher knowledge should be of great value.

The research on large speech events has also advanced the work of psycholinguists. It has led to a wide variety of tests to discover whether text which does (or does not) follow these descriptions of the organization of discourse is easily comprehended and remembered. Carrell's paper at this Congress reported on some of this research involving second language learners, and the journal *Discourse Processes* covers much of the research in this area.

Within these large speech events we find smaller speech events and speech acts which have been studied in our fifth area of research. Researchers have described the underlying structure of smaller speech events such as jokes, of arguments, of complaints, of direction giving, of service encounters – all of which have an internal structure. While it is clear that speakers of all languages have ways of performing these functions – that is, allow for complaining, ways of complimenting, for arguing, etc. – it is also the case that speakers of different languages perform them in slightly different ways. The underlying structure of the complaint, for example, may remain the same in a wide variety of languages. However, when complaints are made, the strength or directness of the complaint, the amount of justification presented, and the types of repairs requested vary greatly from language to language. Given these differences, a revival of contrastive analysis seems to be in the offing. We can now expect to find papers on 'discourse interference' or 'discourse transfer' as part of the contrastive analysis paradigm.

The research on speech acts in less clear. While most applied linguists cite the work of Austin, of Searle, or other philosophers interested in categorizing sentence function, most of the work listed under 'speech acts' does not fit neatly into their paradigm. There is a curious overlap between speech act and small speech event, a problem which Olshtain has addressed in this symposium. This overlap may be due to differences in definitions of speech acts in the Austin and Searle framework, in the Halliday, and the notional/functional approaches to language functions.

While materials have been developed to teach these 'functions', the materials are based on native speaker intuitions on how native speakers perform them. Such intuitions are notoriously unreliable. Speech act/event research, therefore, is crucial to materials development for classes where communicative competence is the goal.

The sixth area is that most often called unequal power discourse. This does not just include doctor-patient interviews (Cicourel's plenary address to the Congress exemplified some of this research, p. 71), or television interviews but also the study of classroom discourse and especially the language classroom. Beginning with Sinclair and Coulthard's volume (1975), Allwright, Chaudron and other researchers have turned to the management of classroom discourse for clues to identify classroom behaviors which do or do not promote language learning.

It should be clear that in each of these six areas, applied linguists have been concerned with three important issues. First, the discovery and description of the system underlying discourse units. Second, the aspects of the discourse which may promote or impede second language learning. Applied linguists are not only interested in describing classroom discourse, the structure of speech events, the structure of written text, the analysis of conversations, the relationship between discourse analysis and syntax. Rather, they have also attempted to discover which factors in the discourse might also encourage or impede language learning. For a review of research on this issue, see Hatch (1979). Third, the research has as one of its goals the validation of teaching materials which purport to give examples of natural speech appropriate for the conduct of face-to-face interaction and materials appropriate for more formal, highly planned discourse (the teaching of composition, for example). In each of these three areas, the study of discourse analysis is crucial to applied linguistics.

This symposium had as one major objective that of acquainting applied linguists with on-going research in discourse analysis and language learning. The summaries which follow are based on the papers prepared for the symposium.

## Part II

## Speech event/speech act research

Professor Wolfson presented a descriptive analysis of two speech acts in American English: invitations and compliments. Such seemingly simple interactions as those involving compliments and invitations are open to serious misinterpretations on the part of both native speakers and language learners when the sociolinguistic rules of the first language are transferred to what appear to be corresponding situations in the target language. Professor Wolfson noted that foreign students in the United States often reported feelings of hurt or anger at imagined slights when Americans made promises to invite, invitations which were never fulfilled.

Wolfson, together with D'Amico-Reisner and Huber, collected data on the ways in which invitations are given in American English. The invitations were collected through participant observation of everyday interaction among a great variety of native speakers. The data showed that two types of invitation-giving must be defined: ambiguous and unambiguous invitations. Unambiguous invitations required that a reference to time and/or mention of place or activity be given as well as a request for a response. For example, the invitation 'Do you want to have lunch tomorrow?' has a request for response ('Do you want'), an activity ('to have lunch'), and reference to time ('tomorrow').

Such unambiguous invitations, however, occur in only about one-third of the data. Instead, the great majority of social commitments were reached through a process of negotiation. The first step in the invitation was a lead, a question or comment which signals that an invitation may be forthcoming if the response is encouraging. The lead, Wolfson noted, serves to establish the availability or willingness of the addressee to engage in a social engagement. A typical lead might be 'What are you doing for dinner?' The lead usually contains one of the properties of an unambiguous invitation, leaving the others unspecified. If both parties are interested, they will then negotiate the full invitation through a set of responses and counter-responses. Wolfson gave the following example of this negotiation of time and place:

A: Ok, thanks for the information. Let's get together soon.
B: I'd love to.
A: Good, I'll give you a call and we'll make a date for lunch.
B: Well, Wednesday is my best day.
A: OK, let's make it Wednesday.
B: Noon OK for you?
A: Noon is fine. Shall I pick you up at your place?
B: That would be great.
A: I'll be there at noon Wednesday.
B: Great. See you then.

Not all leads result in such interactions; it is often an open question as to whether commitments are intended in many cases. Native speakers do not equate all such suggestions as invitations. The person who voices it is

209

nevertheless seen as having made a positive step. Language learners must be able to identify leads, to understand that negotiation is necessary to move towards a social commitment, and finally to be sensitive to the intent of such 'let's get together sometime' leads.

The second speech act studied by Wolfson and Manes is the compliment. A corpus of 686 compliments was collected in a wide variety of speech settings. An analysis of the syntax of all the compliments showed that over 50% made use of one syntactic pattern: *NP is/looks (really) ADJ* (e.g., 'Your car is nice') With the addition of two other patterns, *I (really) like/love NP* and *PRO is (really) ADJ NP*, 85% of the examples could be accounted for. In all, only nine syntactic patterns were needed to account for 97% of the data. Compliments are surprisingly formulaic in syntactic form and, in addition, use few semantic forms. The majority of ADJ type evaluations used only five adjectives: *nice, good, beautiful, pretty* and *great*. The compliments which made use of verbs to carry the positive semantic evaluation used primarily two verbs, *love* and *like*. Wolfson concluded that the formulaic nature of compliments make this particular speech act an easy one to teach. Commenting on the presentation, Hatch pointed out that while compliments are easy to give, the analysis of the total speech event might show that the responses to compliments are much more problematic for the learner. The task in a UCLA class project was for students to compliment five native speakers of American English and five foreign students on an article of apparel ('That's a nice NP'). While native speakers frequently acknowledged the compliment with 'thanks', they also followed with at bridge to a new topic (e.g., 'I got it on sale at Bullocks – do you ever shop there?'). Japanese students were most likely to deny the positive evaluation (e.g., 'Oh no, it's nothing') which resulted in the native speaker reinforcing the compliment ('No, really, I like it a lot'). The need to reoffer the compliment and the lack of bridge led to uneasy continuation of these short encounters. Follow-up research on the total compliment speech event might therefore be worthwhile.

Olshtain and Cohen complimented Wolfson on her research report, stressing the importance of such research on first language data as a basis from which to conduct contrastive analyses of speech acts.

In their presentation, Olshtain & Cohen suggested that the classification of large speech events, small speech events, and speech acts might be clearer if we used the term 'speech act set' to refer to the small speech event.

Olshtain & Cohen define speech acts as referring to the acts we perform when we speak. The speech act set, then, would refer to the set of sentences speakers would use to perform the act in question.

In describing the apology speech act set, Olshtain & Cohen assume there are two participants – one who perceives him/herself as deserving an apology and the second who is perceived by the first as being responsible for the offense.

The apology speech act set was described as including one or more of five potential semantic formulas (i.e., sentences which meet a particular semantic criterion or strategy):

1. An expression of apology
   a) An expression of regret, e.g., 'I'm sorry.'
   b) An offer of apology, e.g., 'I apologize.'
   c) A request for forgiveness, e.g., 'Excuse me', 'Please forgive me', or 'Pardon me.'
2. An explanation or account of the situation, e.g., 'The bus was delayed.'
3. An acknowledgment of responsibility
   a) Accepting the blame, e.g., 'It was my fault'.
   b) Expressing self-deficiency, e.g., 'I was confused', 'I wasn't thinking', 'I didn't see you.'
   c) Recognizing the other person as deserving apology, e.g., 'You are right!'
   d) Expressing lack of intent, e.g., 'I didn't mean to.'
4. An offer of repair, eg., 'Let me help you get up.'
5. A promise of forbearance, e.g, 'I won't do it again.'

It is also possible that the offender will not recognize the need to apologize. Two basic types of denial occur:

1. A denial of the need to apologize, e.g., 'There was no need for you to get insulted.'
2. A denial of responsibility
   a) Not accepting the blame, e.g., 'It wasn't my fault.'
   b) Blaming the other participant for bringing the offense upon himself/herself, e.g., 'It is your own fault.'

Clearly, the intensity of the apology will reflect the severity of the offense and the status of the recipient of the apology. These sociolinguistic factors were included in the following studies of apologies.

The first study was conducted at Hebrew University where 44 college students were given a role-play task in which they reacted to written situations with apologies. 12 subjects were native speakers of English and responded to English situations. 12 subjects provided Hebrew apologies to

211

the same situations, and 20 students provided English responses while Hebrew was their native language.

The written situations included four which were designed to elicit different degrees of intensity in apologizing: hitting a car, bumping into a lady and a) hurting her, b) just shaking her up, and c) because she was in the way. Four additional situations were designed to test the effect of status of the addressee on the form of the apology: 1) insulting someone at a meeting, 2) forgetting a meeting with a) a boss, b) a friend, c) your son. The subjects read the situation and then the investigator role-played the person to whom the apology was to be addressed.

A second study was conducted using this same procedure but involving Russian and English native speakers learning Hebrew. 12 Russian speakers responded to situations in Russian. 13 speakers of English and 14 speakers of Russian, all intermediate learners of Hebrew, were asked to react to the situations in Hebrew.

Finally, four graduate students at UCLA collected data using the same data-collection procedures. In the Ford, Castello, Kim and Wu studies (1981), speakers responded to these situations calling for apologies in English, Spanish, Korean, and Chinese. The number of subjects in these four studies was limited but added more information on cross-cultural use and form of the apology.

The data showed that native speakers within a language group perform apologies in similar ways. Further, it appears that second language learners who are not yet highly proficient in the second language may lack the linguistic ability to adequately perform apologies. Finally, it seems clear that second language learners do transfer apology behavior acceptable in their first language to the target language situation. For example, Hebrew learners of English in the English role play situations did not express an apology as often as native speakers of English in insulting someone at a meeting and in forgetting to take their son shopping. Nor did they offer a repair as frequently as native speakers of English in forgetting a meeting with their boss and in forgetting to take their son shopping. There were, however, some situations in which Hebrew speakers used native-like apologies rather than Hebrew patterns in English apologies. For example, they expressed an apology for bumping into a lady though Hebrew native speakers responding to the parallel Hebrew situation did not. In addition, while Hebrew speakers performing in English often did give an apology, the intensity of regret (e.g., 'I'm *very* sorry') did not always match that of native speakers.

Each of the studies reported by Olshtain & Cohen showed that transfer of patterns from the first language to the second do occur at the speech act set level. The studies also show a gradual change in research procedures in an attempt to overcome some of the problems related to design which Olshtain & Cohen identified. The Ford study, for example, included a number of alternative speech acts in an attempt to break a pattern of similar responses generated by the fact that all responses were apologies. The later studies have also considered the language of instruction for the experiment, the sex of the speaker and the addressee, the length of response generated as well as a variety of other factors. They also suggested that the ratings of acceptability of apologies (a procedure also advocated by Blum-Kulka at this Congress) be incorporated into future research on speech acts.

Concluding their report, Olshtain & Cohen linked their research to the preparation of classroom teaching objectives, materials development, and classroom instruction.

In commenting on this paper, Edmondson asked whether each of the semantic formulas of the speech event were obligatory and whether the order in which they occurred followed that given above. Cohen responded that each appeared to be optional so long as one was present. Ordering of the semantic formulas within the apology had not been tallied for apologies. In a similar study but of the 'complaint' speech event, which students of Hatch & Cohen are doing at UCLA, the ordering does appear to be fairly set.

## Part III

## Conversational analysis

Claus Færch and Esther Glahn reported on research carried out within the PIF Project at the University of Copenhagen. The overall goal of the project is a description of the interlanguage development of Danish learners of English within the areas of pronunciation, grammar, lexis and discourse (see Færch 1979 for a description of the project). The project has as a data base essays, oral and written film descriptions and video-taped conversations between learners and native speakers of English. The data was collected on a cross-sectional basis from 120 learners from 12 different levels and types of education, spanning a range from grade 6 (having 1 year of English) to students at university level (with 9–10 years of English).

Different facets of the project were reported on in papers at the congress (see abstracts in *AILA 81: Proceedings I* by Albrechtsen & Henriksen; Holmen, Glahn & Nielsen; Grindsted & Rechnitzer; Phillipson & Lauridsen). Two parts of the analyses were described in the symposium: 1) the dominance of the interactions by native speakers and 2) the relationship between communication strategies and discourse analysis.

In her report on a study conducted by Anne Holmen on the discourse structure of the learner–native speaker interactions, Glahn demonstrated how the dominance by native speakers is revealed through the numerically larger number of elicitation and follow-up moves by native speakers than by learners. The interactions take on the discourse form of an interview rather than a conversation. This can also be measured using turn length: native speaker length of turn greatly exceeds that of the learner even at the more advanced levels.

That the 'conversations' developed into 'interviews' with the native speaker assuming the role of the interviewer went counter to the instructions given to learners and native speakers. Both had been provided with the same list of possible discussion topics (topics such as spare time, plans for the future, sex roles, etc.), and the learners had been explicitly instructed that the situation was to be that of an informal chat. Furthermore, a symmetric situation had been aimed at by choosing native speakers who in most cases were the same age as the learners they were talking to.

Glahn suggested three possible explanations for the interview character of the conversations. First, the fact that superior knowledge of the language in one of the conversational parties (in this case the native speaker) automatically makes this party more powerful. Second, however carefully the experimental situation had been planned, the setting might still have influenced the discourse pattern in a way that the researchers had not foreseen. Third, foreign language instruction may encourage the learner either to play a passive role or to provide semi-lectures with an apparent maxim of "the more said, the better". Such behavior is not appropriate in normal face-to-face communication, and to overcome this problem language teachers should try to create situations in which the learner must take an active rather than a passive role in nominating topics, asking questions, and practicing the other requirements of conversational maintenance.

In this presentation, Færch took as a point of departure metacommunicative 'loops' in the discourse structure, ie stretches of speech which do not directly develop the communication with respect to the propositional and illocutionary content. As examples of such loops were mentioned gambits (eg 'what I wanted to say' and 'the point is', see further Keller & Taba-Warner 1976, 1977, 1979; Edmondson & House 1981; Færch/Kasper, in press), repairs and communication strategies. Metacommunicative loops may affect the discourse structure in two ways: (1) they can constitute an exchange of turns, as in the case of a self-initiated, other-completed repair; (2) they can occur within a turn at speech, as for example a self-initiated, self-completed repair (for repair types, see Schegloff, Jefferson & Sacks 1977). Both types of loops can be found in the case of communication strategies, defined by Færch as problem-solving plans following Færch & Kasper (1980, and forthcoming b).

The first type is seen in cases where learners either directly appeal for assistance or clearly signal to their interlocutor that they are experiencing a problem. This is seen in the following example:

L: I wanted to improve my knowledge of – what is Kunst
NS: art
L: art in England.
[data from the Bochum project, see below]

L: oh (giggles) I'm very oh –
what do you call it –
you know (laughs) I get a red in my head – (giggles)
NS: yes shy
L: shy yer (giggles)
[PIF data]

The second type is seen in cases where the native speaker is unable to provide the learner with a solution to his problem, or in cases in which the learner signals paralinguistically that he intends to solve his problem himself:

NS: how do you get to school
L: ... sometimes I take my er – er – what's it called – er – er my cykel
– er (laugh) knallert – ['knælə] – er (laugh)
[PIF data; 'cykel', 'knallert' Danish for 'bicycle', 'moped' respectively]

Both types of communication stategies can be characterized as *overt* strategies in that the communicative problem shows directly in the performance. Overt communication strategies are particulary frequent at low and intermediate levels, where one can furthermore establish a development from L1 to L2 based strategies. But even at intermediate levels, learners have a surprisingly large proportion of L1 based strategies. Færch suggested that this preference can be traced back to the classroom where teachers frequently serve as walking dictionaries for learners. While such appeals for direct translation equivalents are not felicitous outside the classroom, learners persisted in such appeals.

Overt communication strategies affect the discourse structure in establishing metacommunicative loops in the development of the propositional and illocutionary content. But not all communication strategies have this effect: especially at the more advanced levels, learners are better able to predict communicative problems and to solve these problems in advance by using language strategically. Such 'covert' communication strategies (cf. Færch & Kasper, forthcoming a) do not constitute loops in the discourse and hence help increase the learners' overall fluency.

Willis Edmondson gave a brief report on the Bochum Project "kommunikative Kompetenz als realisierbares Lernziel". The project is being carried out at Ruhr-Universität Bochum.

The empirical core for the project was set first. This consisted of a set of hypotheses, the basic research design, and a set of data elicitation procedures. The data base includes batteries of dyadic role plays performed by pairs of English native speakers (speaking English, pairs of German native speakers (speaking German), and pairs of German advanced learners of English and English native speakers (speaking English). For a full outline of this core, see Edmondson et al (1980). Second, a model for the analysis of spoken discourse was drawn up based on the spoken discourse of the target language. This model is described in depth in Edmondson's *Spoken Discourse. A model for Analysis* (1981a).

Using the analytic model, a number of analyses have been done centering on data of German students learning English. A German-English contrastive analysis in the area of pragmatics is one major area of data analysis. One such study was presented by House at the Congress (see *AILA 81*: *Proceedings I*:134; also House 1979). A second area is the study of the Interlanguage of advanced German learners of English. This work was reported on by Kasper at this Congress (1981a; see and also Kasper 1981b). The third area of data analysis was the application of the analytic model to the analysis of classroom discourse.

The research was planned so that it would feed into both materials development and teacher education. 'Trial-and-error materials development', with a series of communication courses given to English teacher trainees is one example. Pedagogic materials have also been designed. A pedagogic interactional grammar of English (see Edmondson and House 1981) and a written communication course for teachers in training (Edmondson 1981b) directly address pedagogic issues.

The project has two special perspectives as well. First, the project is seen as contributing to our understanding of discourse and of the Interlanguage process. Second, the project also relates the study of discourse to the teaching of reading and writing. Thus, the project covers both the written and the spoken language. The scope of the project is wide and the variety of possible analyses, types of research permitted, and the classroom applications of results are correspondingly large. The sound basis on which the project was formed, however, allows for large-scale research and application.

# Part IV

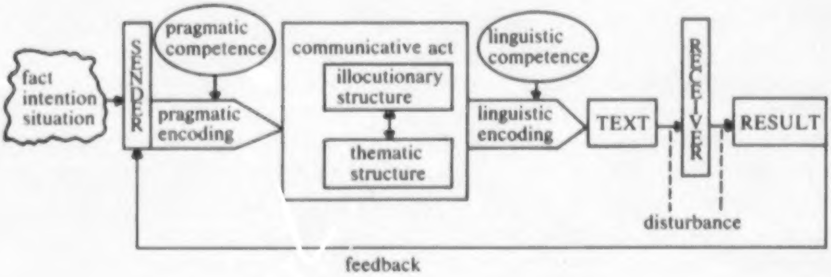
# Text analysis

Inger Rosengren reported on the 'Fachsprachliche Kommunikation' (FAK) (Communication for Special Purposes) project. This project is carrying out an empirical analysis of certain kinds of commercial texts in order to test what Rosengren intuitively regards as real text structure.

The two-fold aim of the project then is:

1. The analysis of the communicative structure of commercial texts based on a communicative top-down theory.
2. The analysis of the reading comprehension of commercial letters so as to study the role of pragmatic text structure on the understanding of written texts.

Before testing begins, a first approximation to a communicative model was developed. This model of communication (Koch, Rosengren & Schonebohm 1978) is illustrated in this figure:



In this model, the sender uses both pragmatic and linquistic competence to encode the intended message. While the model shows pragmatic and linguistic competence as separate factors controlling pragmatic and linguistic coding, in reality, Rosengren expects that there will be some interaction between these two competencies. A feedback mechanism, represented by the line at the bottom of the figure, tells the sender whether or not the message is understood.

The analysis which grows out of this model has three levels: the *illocutionary*, the *thematic* and the *lexico-syntactic* level. The smallest unit of analysis for the illocutionary level is the illocution which is realized as a sentence. For the thematic level, the smallest level of analysis is the proposition. Analyzing texts using these three levels, Rosengren hopes eventually to be able to provide information on the interaction between pragmatic and linguistic competence.

The empirical part of the research will be a test of the theory via experiments in reading comprehension of commercial letters. Clearly, learners do not understand texts adequately even when they know the meanings of all the words Neither do they understand the text using syntactic processing even with lexical knowledge. Rather, it is expected that the receiver must grasp the structure of the text itself.

Finally, Rosengren noted two problematic areas for research in text analysis. First, many researchers fail to distinquish between *text* and *discourse*. Discourse, according to Rosengren, is the spoken or written individual text and text is a construct of features common to all spoken or written text in communicative contexts. Second, Rosengren believes that a clear distinction must be drawn between the static notion of the sentence (which is related to linguistic competence) and the dynamic concept of text. The sentence *is* both a unit of grammar (normally called the sentence) and a unit of pragmatics (normally called a speech act). Thus the sentence in a text is the unit where linguistic and pragmatic competencies meet. Rosengren believes that, with the FAK model of communicative theory and their levels of analyses, their research will allow them to further clarify the relationship between pragmatic and linguistic competence.

Krashen turned to written text as another source of input to second language learning. In previous papers, Krashen has emphasized the importance of discourse input to second language learning. In this paper, he expanded on the Input hypothesis (a hypothesis which claims that learners *acquire* language from comprehensible input though they may *learn* language from language instruction.)

The distinction between acquisition and learning is again stressed in this paper. While the Input hypothesis has addressed the acquisition of spoken language based on comprehensible input (usually in interaction of learners with native speakers), this paper considers the acquisition of the written language from comprehensible input in the visual mode, that is, from reading. The basic concept presented in the paper is that input (reading) and instruction (or practice) make different kinds of contributions to writing skills. The hypothesis is not expected to distinguish excellent writers from good writers, but it should distinguish good writers from poor writers. True excellence in writing depends on a variety of other variables. No perfect correlation is expected but a positive relationship should be evident in empirical data.

In order to support the Input hypothesis (i.e., that reading allows one to acquire good writing skills), Krashen reviewed the literature which speaks to this issue. While many of the studies reviewed supported the hypothesis, Krashen also found studies which did not. These studies suggested that writing is, or can be, taught.

In order to account for these counterexamples, Krashen suggested that the data show that something is gained from instruction and from practice. However, it is not the acquisition of the writing skill. Instruction and practice appear to help writers who have already acquired the written language to become more efficient in the composing process. Good writers are also good revisers. According to research which Krashen reviewed, such writers make more revisions, stop more often to read what they have written, and the kinds of changes they make are different from those made by poor writers. Poor writers, according to the research, are overconcerned with mechanics and usage – a concern which gets in the way of the development of ideas. Case studies show that such writers lose track of their ideas, break the rhythm generated by thinking and writing, and have trouble getting their thoughts down on paper.

Krashen, therefore, believes that reading (input) is the only way of developing competence in writing but that certain aspects of performance can be taught, or can develop with practice. The input gives the learners a 'feel' for written language, planned discourse. It gives the writer the unconscious knowledge of what good writing looks like and the organization of the discourse. Instruction and practice may help the learner plan and revise the discourse; good learners will do this with an emphasis on content rather than on form.

In relating the hypothesis to language pedagogy, Krashen suggests that a program to encourage competence in the written language should include, first of all, reading. The language arts programs of early schooling should encourage reading outside as well as in inside school. It should also include grammar. Grammar is seen as having two functions in the language arts program. First, it is of use as a Monitor or Editor. Some rules for editing can be taught (even though they are a very small subset of all the rules of discourse). Second, the study of grammar gives students an appreciation of linguistics and sociolinguistics, and a better understanding of prescriptivism, as well as of correctness in usage. Third, the writing program should encourage the development of an efficient composing process. This includes the options of prewriting organization (from which they can select that best suited to their own composing preferences), planning and revision options. The theory, however, implies that working on the composing process is not what allows the student to acquire the competence for writing. Rather, the classroom can best help the student to understand that writing does not consist of writing out a composition in a linear fashion. It will teach planning and revision strategies.

The basic finding of the research that reading for pleasure in the early years produces good writers does not argue that there is an optimal age for acquisition of the written language. Krashen believes that there is hope that the adult non-reader can make significant progress in the acquisition of writing given sufficient reading input.

Krashen sees strong similarities between the acquisition of the oral and written language. Second language classes are seen as being important in giving the learner input which the world outside the classroom cannot give. The ideal second language class, given this theory, is one which gives large amounts of comprehensible input. For the acquisition of planned written discourse, that comprehensible input must be reading. While reading is seen as the main *causal* element in the acquisition of written language, this does not mean that writing classes should be devoted entirely to reading. Reading can be done outside the classroom. The classroom, then, is the place to encourage and facilitate reading and to encourage students in the composing process.

## Part V
## Conclusion

Discourse analysis covers a wide range of possible research as the papers at this symposium have illustrated. However, research on only two of the six areas of discourse analysis was highlighted here. Nevertheless, the papers presented show that different perspectives on discourse analysis lead to different views as to what areas should be researched, how that research should be done, and the potential value of research results to classroom practice.

When different insights and different research traditions are considered, as they have been at this Congress, it is expected that what emerges is a more comprehensive understanding of a particular field. We hope that this symposium may have served this function for discourse analysis.

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